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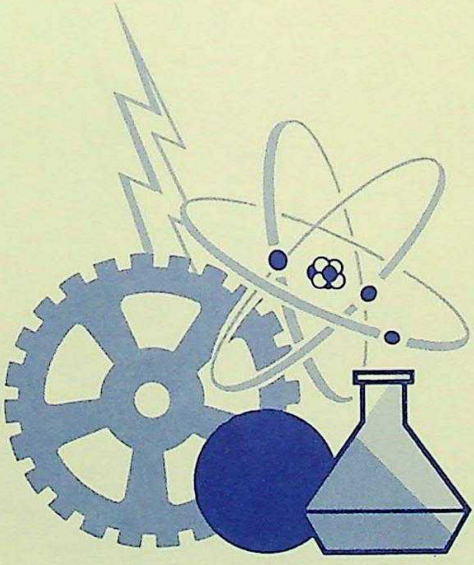
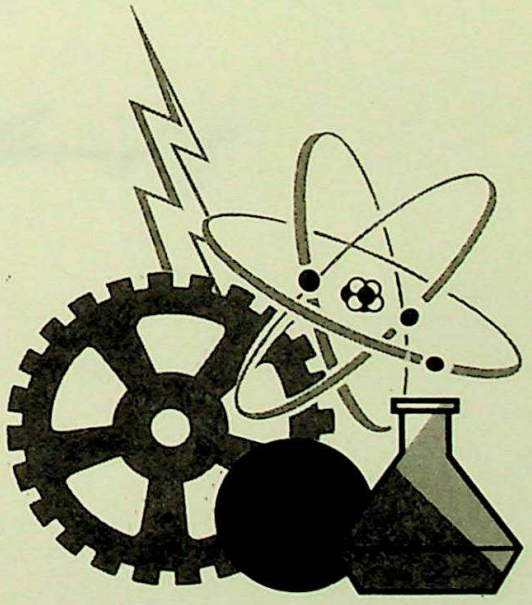
Commissioner of Patents and Trademarks



ANNUAL REPORT
FISCAL YEAR '81

Commissioner of Patents and Trademarks



ANNUAL REPORT
FISCAL YEAR '81

U.S. DEPARTMENT OF COMMERCE/PATENT AND TRADEMARK OFFICE

U.S. DEPARTMENT OF COMMERCE
Malcolm Baldrige, Secretary

U.S. PATENT AND TRADEMARK OFFICE
Gerald J. Mossinghoff, Commissioner
Donald J. Quigg, Deputy Commissioner
Rene D. Tegtmeyer, Assistant Commissioner for Patents
Margaret M. Laurence, Assistant Commissioner for Trademarks
Richard J. Shakman, Assistant Commissioner for Administration
Bradford R. Huther, Assistant Commissioner for Finance and Planning

March 1982

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Washington, D.C. 20402

Vigorous and effective patent and trademark systems are indispensible to our economic growth and national well-being. This report describes the operations of the Patent and Trademark Office during FY 1981 and the status of the Office at the close of that year. It is apparent that the Patent Office is not serving the public as well as it must. This report also describes the steps we are now taking to bring about lasting and substantial improvements in our service to inventors and industry.

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Annual Report of the Commissioner of Patents and Trademarks Fiscal Year 1981*

MISSION

The Patent and Trademark Office (PTO) promotes the national economy by administering both the patent and trademark laws of the United States.

Patent laws encourage technological advancement by providing incentives to invent, invest, and disclose new technology. The Patent and Trademark Office's primary role in administering these laws is to examine patent applications and grant patent protection for qualified inventions. The PTO is also responsible for collecting, assembling, and disseminating the technological information disclosed in patent grants.

Federal trademark laws promote an ordered and healthy economy by enabling Federal registration of trademarks. Trademarks help prevent product confusion among consumers and foster public awareness of the source of goods and services in the marketplace. The PTO examines applications to register trademarks and grants Federal registration to the owners of qualified marks. The PTO also maintains a forum for resolving disputes on trademark rights.

The PTO is an agency of the U.S. Department of Commerce and is located in the Crystal City office complex in Arlington, Va.

COMMITMENT TO IMPROVE THE PATENT AND TRADEMARK OFFICE

The problems of the Patent and Trademark Office in carrying out its mission are well known. With increasing backlogs and increasing pendency time, the PTO is not serving inventors or industry as well as it should. By the end of FY 1981, the patent backlog had grown to more than 220,000 applications, including designs, and the trademark backlog to more than 116,000 applications. It took an average of 22.4 months to get a patent in FY 1981, while the average time to register a trademark was 24 months. In addition, almost 7 percent of the patents were missing from the examiners' files, which directly affects the thoroughness for the search process.

In 1981, in response to the many problems of the PTO, the Administration set a goal to bring about lasting improvements in the PTO, improvements which would make the PTO a first-class service organization. The Secretary of Commerce is committed to support a four-point plan to make

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* This report summarizes the activities of the U.S. Patent and Trademark Office (the PTO) during its 1981 fiscal year—October 1, 1980, through September 30, 1981. All references to a specific year are to a fiscal year, unless otherwise noted.

the patent and trademark systems responsive to the modern needs of inventors, business executives, and Government officials.

The anchor of the four-point plan concerns PTO operations. In order to provide the examining resources to stop the increase in the patent backlog, the PTO plans to hire 235 new examiners in FY 1982. In addition, the PTO is committed to decreasing the amount of time it takes to get a patent to 18 months by FY 1987 (Plan 18/87). This will require both professional and clerical enhancements thoughout the patent side of the PTO to accomplish all preexamination functions in 1 month, examination in 1 year, and postexamination operations in 5 months.

For trademarks, the PTO is committed to Plan 3/13, whereby the average time it takes to register a trademark will be reduced to 3 months to first action on an application and 13 months to disposal of that application by FY 1985.

To support Plan 18/87 and Plan 3/13 and to provide quality products and services, the PTO will take aggressive steps to place automated systems at the disposal of patent and trademark examiners. Planning for these systems began in FY 1981, and a first draft of the PTO automation study report mandated under Section 9 of P.L. 96-517 was prepared.

The second component of the four-point plan is the reexamination of patents under P.L. 96-517. Reexamination will enable a patent owner or competitor to ask the PTO to reexamine an issued U.S. patent to see if it should be amended or cancelled because of evidence of earlier work. This new and relatively inexpensive procedure is expected to obviate the need for protracted patent litigation in many cases.

The third element of the Administration's plan is to support legislation to establish the Court of Appeals for the Federal Circuit, a new court resulting from the merger of the Court of Claims and the Court of Customs and Patent Appeals. By providing a single authoritative tribunal to handle patent cases nationwide, the new court would contribute greatly to a single standard of patentability which is understandable to business executives and inventors alike.

The final element of the four-point plan is the Administration's strong support for enactment of a uniform Federal patent policy applicable to all Government agencies and all their contractors. This policy is designed to spur the private sector to invest in inventions resulting from Federal sponsorship. It will provide coherent and understandable policy for giving title to contractors for inventions made under Federal sponsorship.

Steps toward carrying out the four-point plan began during FY 1981, as detailed in this report. Even with implementation of this program, results will not be immediate. For example, the patent and trademark backlogs and pendency times will continue to grow in FY 1982 no matter what measures are put in place at this time. The Administration is confident that initiation of this plan, and the funding and fee schedules to support it, will bring about significant and lasting improvements in the PTO itself and will revitalize the patent and trademark systems so they will serve industry and inventors as they must.

chapter one
FINANCIAL AFFAIRS

FINANCIAL AFFAIRS

Operating Costs

Total operating costs for the PTO in FY 1981 were $113,122,000, a 9 percent increase over FY 1980 (without adjustment for inflation). Compensation and benefits totalling $83,037,000 comprised 73 percent of operating costs. Printing of patents and/or patent and trademark information and reproduction costs were $15,748,000, or 14 percent of operating costs. Other costs of $14,337,000 were 13 percent of PTO total operating costs. Figure 1 shows that patent processing in FY 1981 was about 71 percent of PTO operating costs, trademark processing 7 percent, and dissemination of patent and trademark information 22 percent. Table 1 gives the historical data on PTO operating costs*.

Appropriations

Total FY 1981 Congressional appropriations for the PTO rose to $116,150,000, an increase of more than $11 million of the FY 1980 appropriations (see Table 2). After adjusting for inflation, this represents a real increase of $3,809,000. Increased funding went to the areas of patent examination, patent clerical, patent and trademark printing, trademark examination, trademark trial and appeal, data and document retrieval, solicitor, management planning, administrative services and automatic data processing.

Total personnel staffing in the PTO increased in FY 1981. Total staff numbered 2,755, which was 172 more people than in FY 1980 (see Table 3).

Fee Income

Fees collected by the PTO from users of PTO services are deposited into the general fund of the U.S. Treasury, and do not directly benefit the Patent and Trademark Office. The fees received in FY 1981 totalled $29,493,000, or just over one-fourth of the PTO operating costs. Table 4

* All figures are included in the text. All tables are in the appendix at the end of the report.

Figure 1

PATENT AND TRADEMARK OFFICE FY 1981 OPERATING COSTS ($113,122,000)

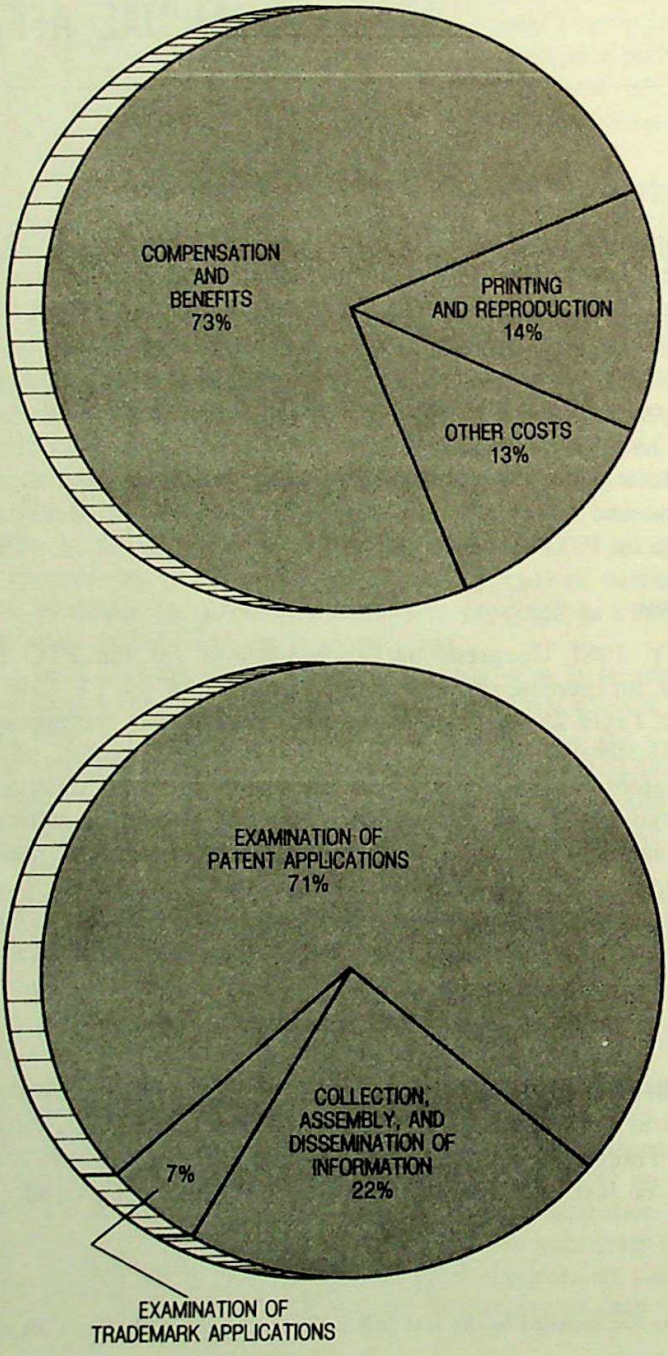

COMPENSATION AND BENEFITS 73%
PRINTING AND REPRODUCTION 14%
OTHER COSTS 13%
EXAMINATION OF PATENT APPLICATIONS 71%
COLLECTION, ASSEMBLY, AND DISSEMINATION OF INFORMATION 22%
7%
EXAMINATION OF TRADEMARK APPLICATIONS

Figure 2

PATENT AND TRADEMARK OFFICE FY 1981 INCOME FROM FEES ($29,493,000)

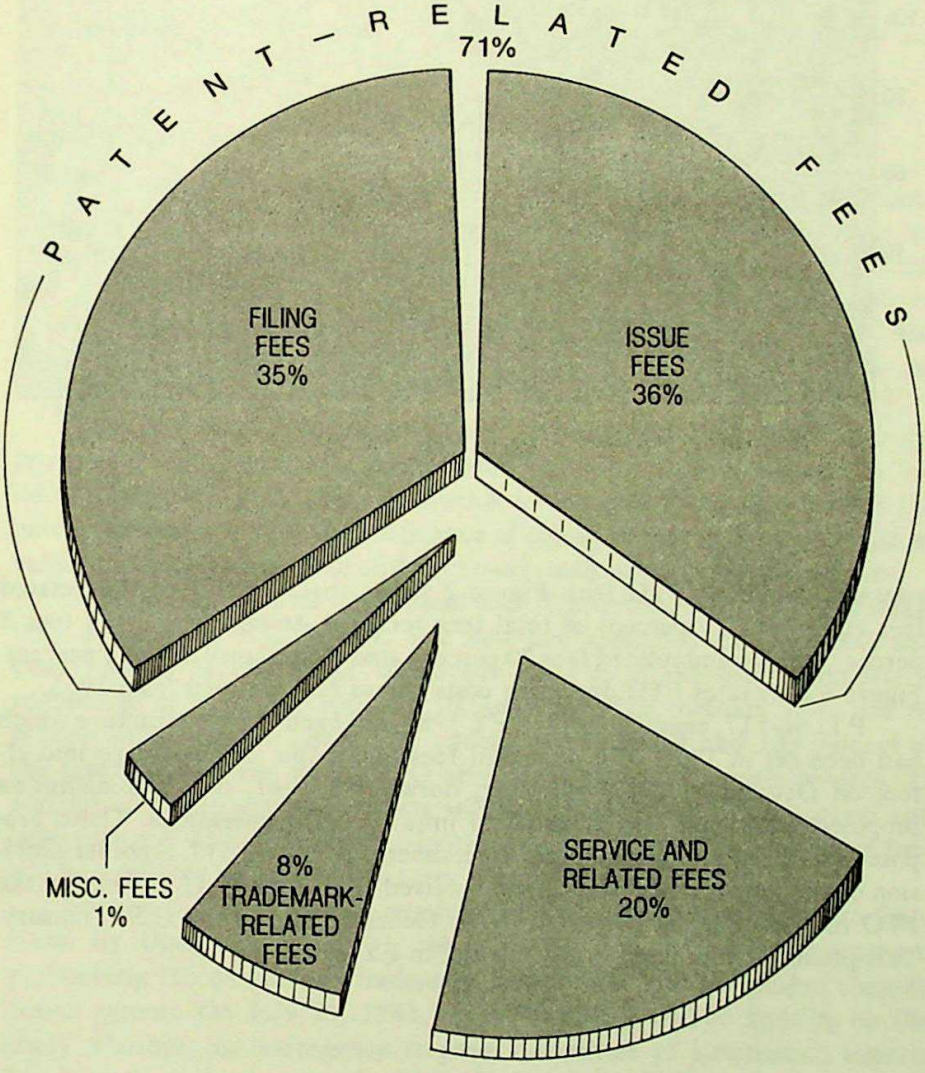
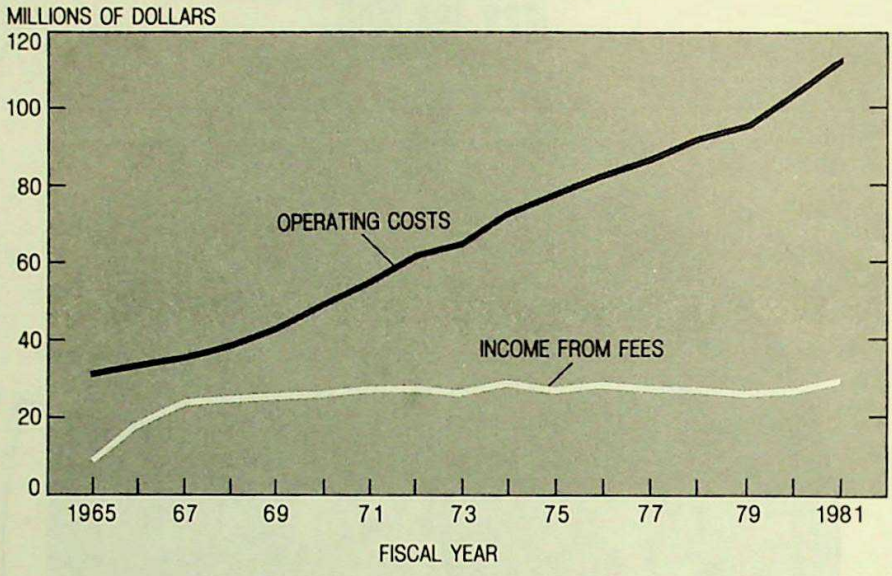


Figure 3

INCOME AND OPERATING COSTS (1965-1981)



contains details on PTO fees. Figure 2 shows that, in 1981, patent-related fees comprised 71 percent of total fees received, trademark-related fees 8 percent, service and related fees 20 percent, and miscellaneous fees 1 percent. Figure 3 illustrates PTO operating costs versus fees charged from 1965.

P.L. 96-517, enacted early in FY 1981, changed the fee structure which had been set in 1965. The increased fees under this law would go into effect on October 1, 1982. However, during FY 1981, the Administration proposed additional fee increases to improve PTO operations. Those proposed increases would require an amendment to P.L. 96-517. Another provision of the new law was that funds received from fees could be kept by the PTO instead of being deposited in the General Fund of the U.S. Treasury. This provision will be effective starting in FY 1983.

chapter two
LEGISLATION

LEGISLATION

Public Law 96-517

Public Law 96-517, enacted on December 12, 1980, made significant changes in existing patent and trademark laws. This new law provides for the reexamination of patents, revision of the patent and trademark fee system, and the establishment of new rules regarding the allocation of rights to inventions made with Federal assistance. P.L. 96-517 also requires the Patent and Trademark Office to report to the Congress on its plans to automate operations.

The new reexamination procedure, which went into effect in July, provides a simple and efficient administrative mechanism to test the validity of issued patents. This innovation is expected to greatly improve the patent system by raising the confidence of patent owners and others in patent validity without the need to resort to protracted litigation in many cases.

The fee structure of the Patent and Trademark Office is fundamentally changed by P.L. 96-517. The new law abolished statutory fees and established a system under which the PTO must set fees to recover a percentage of operating costs for its activities. The recovery rates are 50 percent of the cost of patent and trademark processing and 100 percent of the cost for all other direct PTO services. Except for design patents, 25 percent of patent processing costs will be recovered from application and issue fees and 25 percent from maintenance fees. Revenues from these fees will be available to the PTO to carry out its activities.

Section 9 of P.L. 96-517 requires the Commissioner to report to Congress, by December 12, 1982, the plans to automate PTO operations, particularly the patent and trademark search files and the patent classification system. On July 23, 1981, the PTO held a public hearing on the study. Further, an interagency steering committee of automation experts has been formed to advise the PTO. The PTO published a draft report in November 1981, and the final report will be completed in 1982.

The policy for allocating rights to federally sponsored inventions, as established by P.L. 96-517, allows small businesses and nonprofit organizations to elect to retain title to inventions developed by them with Federal funding. The new law clarifies the rights of Federal agencies with respect to the licensing of patents owned by the Federal Government.

Federal Patent Policy

During 1981, Congress considered legislation that would further change Federal patent policy. This legislation would permit any contractor to elect to retain title to inventions developed with Federal sponsorship. The Commissioner testified in support of this legislation before a joint Senate and House hearing in September 1981, stating that the legislation will create a truly uniform patent policy, encourage businesses to invest in inventions resulting from Federal sponsorship, and relieve the Federal Government from the responsibility, burdens, and costs of seeking commercial uses for inventions made under Federal sponsorship.

Patent Term Restoration Act of 1981

Legislation was introduced in both houses of Congress to amend the patent law to provide an extension of the patent term for patented products, or methods of using products, that are subject to Federal regulatory review before they are permitted to be introduced for commercial use. The extension would equal the regulatory review period up to a maximum of 7 years. The PTO supported the legislation in the Congress, testifying that the legislation would restore full patent incentives to patent owners whose products and processes have been held back from the marketplace by Federal regulatory procedures.

Federal Courts Improvement Acts

Legislation was introduced in the Congress in FY 1981 to establish a U.S. Court of Appeals for the Federal Circuit (CAFC). The CAFC would combine in a single court the Court of Claims and the Court of Customs and Patent Appeals. The CAFC would decide appeals from the Patent and Trademark Office now heard by the Court of Customs and Patent Appeals, and in addition, would hear patent-related appeals from all of the U.S. District Courts nationwide. The PTO actively supported this legislation in the 97th Congress arguing that creating a single authoritative tribunal to handle patent cases nationwide would contribute to a uniform standard of patentability.

Membership on the Trademark Trial and Appeal Board

Public Law 96-455, enacted during 1981, expressly authorized vacancies on the Trademark Trial and Appeal Board to be filled by any person qualified in the field of trademark law, regardless of where the person was employed at the time of selection.

chapter three

INTERNATIONAL COOPERATION

INTERNATIONAL COOPERATION

The Patent and Trademark Office pursues its responsibility to promote U.S. business interests in the international, as well as the domestic, arena by working for effective patent and trademark protection throughout the world. The PTO's efforts in this area are directed toward the development of simpler, less expensive, and more effective means for U.S. nationals to secure and protect their industrial property rights.

Revision of the Paris Convention

Patents and trademarks are generally effective only within the borders of countries which issue the grant or the registration. To make it easier to obtain protection across international borders, 13 countries agreed almost a century ago to establish the Paris Convention for the Protection of Industrial Property, to which the United States has been a party since 1887. The original Paris Convention has been revised several times, and further revisions are being considered.

The Patent and Trademark Office participated in the Second Session of the Diplomatic Conference for the Revision of the Paris Convention, held in Nairobi, Kenya, from September 28 to October 24, 1981. During the Conference, certain provisional agreements were reached. All participants, except the United States, agreed to amend the Convention to permit developing countries to grant nonvoluntary, exclusive licenses to patents where there was an abuse of the patent rights and nonworking of the patent was an element of that abuse. The United States objected to the amendment because an exclusive license, which would deprive the inventor of the right to use his or her own invention, was an excessive sanction for an abuse.

The participants also agreed to tighten the present text of the Convention by providing that, with the exception noted, nonvoluntary licenses must be nonexclusive. Another point of agreement (again, excluding the United States) was that developing countries could require forfeiture of a nonworked patent 5 years from patent grant without the prior grant of a nonvoluntary license (which is a requirement of the present text). The status of inventors' certificates, another issue of the Conference, was considered, but no conclusions were reached.

International Code of Conduct for the Transfer of Technology

The International Code of Conduct for the Transfer of Technology is an instrument being negotiated under the auspices of the United Nations

Conference on Trade and Development (UNCTAD). Although its legal nature has not yet been determined, the Code is intended to facilitate technology transfer agreements between countries by various means, such as discouraging certain restrictive business practices and enumerating responsibilities and obligations of the parties to transactions involving transfer of technology. During the fourth session of the U.N. Conference on the Code of Conduct in April 1981, it became clear that no substantial agreement could be reached. Therefore, the Conference decided to transmit the existing draft Code to the U.N. General Assembly for further action. By resolution 31/140, the General Assembly decided on December 16, 1981, to establish an Interim Committee which would meet during 1982 to consider and seek solutions to the outstanding issues and make proposals thereon to the U.N. Conference at the fifth session.

Training Programs for Developing Countries

The Patent and Trademark Office continued to provide training in the industrial property field to nationals from a number of developing countries. Four Chinese nationals, who will become patent examiners, spent 6 months in the PTO studying U.S. patent examination procedures. Another four Chinese nationals, who will become patent agents, spent 2 weeks in the PTO studying patent procedures from the viewpoint of patent practitioners. A 4 week training program on patent and trademark procedures and administrative practices was given for nationals from Indonesia, India, Liberia, and Uganda. In addition, two trademark examiners from China participated in a 2 month training course which included the instruction the PTO offers to its new trademark examiners.

Involvement with the People's Republic of China

In addition to the training program in the patent and trademark fields for Chinese nationals, representatives of the PTO and other bureaus in the Department of Commerce joined representatives from the Licensing Executives Society on a 2 week mission to the PRC in November 1980. This delegation, headed by the Commissioner, visited 30 organizations in 4 different cities (Beijing, Shanghai, Guangzhow, and Shenzen) to learn about Chinese efforts to reinforce their intellectual property system and to learn about the licensing and sale of technology to and from the PRC. The Licensing Executives Society U.S.A./Canada published a report titled "U.S. and China: Technology and Patents, Sale and License," which contained the results of this cooperative effort. In addition, the PTO participated in a training program in Beijing for Chinese patent agents and in a program on documentation in the Chinese patent office.

Other International Activities

The Patent and Trademark Office, in cooperation with the Departments of State and Commerce:

- continued assisting the Department of Commerce in review of the U.N. Draft Convention on the Law of the Sea;
- continued participation in implementation of the Nice Agreement on International Trademark Classification;
- continued participation in the World Intellectual Property Organization (WIPO) Permanent Committee on Patent Information; and
- continued participation in an OECD Experts Group considering the confidentiality of data required by governments under chemical control laws.

chapter four
AUTOMATION

AUTOMATION

Two events significantly influenced the Patent and Trademark Office's automation planning: (1) the passage of Public Law 96-517, Section 9 of which requires the PTO to develop a complete plan for automating operations; and, (2) top management determination to improve PTO operations through a more aggressive use of automation.

In P.L. 96-517, Congress required that the PTO "...shall report to Congress a plan to identify ... computerized data and retrieval systems equivalent to the latest state of the art which can be applied to all aspects of the operation... The report shall specify the cost of implementing the plan (and) how rapidly the plan can be implemented ... without regard to funding which is or which may be available for this purpose in the future." The PTO prepared a draft of this report for public comment. The automation objectives in the report aimed at major PTO goals: reducing patent and trademark pendency times and fully automating the PTO by the 1990's.

Automatic Data Processing (ADP) currently plays a significant role in the PTO. Typical data processing functions such as payroll, personnel, and accounting are automated. Automation also has expanded into direct program support areas, such as automated searching, patent and trademark application workflow and inventory control, productivity measurement, and automated printing. The role of ADP is expected to increase dramatically during the next 10 years as increased importance is placed on ADP as a principal tool for solving long-standing PTO problems. PTO automation accomplishments during FY 1981 are outlined below.

PALM 3

Implementation of the PALM 3 (Patent Application Locator and Monitoring) System continued in FY 1981. Building on the progress made in past years, PALM 3 was expanded to provide on-line support for reporting examiner time and production; for improving the control over the granting of licenses to file applications abroad; for determining ownership rights to inventions developed under Government contract or grant; and for improving control over post-allowance processing.

Automated Full-Text Searching

The PTO initiated experimentation to evaluate alternative methods for conducting automated patent searches and to provide experience with

commercially available systems. The PTO awarded a contract for comparing various commercial patent data base systems. The contractor will provide terminals in the patent examining groups to give the examiners direct access to those systems. The capabilities of those systems include full-text searching of front-page text and bibliographic data, keyword searches of chemical patents, citation searching, and display of front-page drawings and chemical structures.

In addition, the PTO reached a barter agreement with another company whereby the PTO will provide a special compilation of the patent full-text data base tapes from 1970-1981. In return, the patent examining corps will be provided terminals and trained to conduct experimental on-line searches in selected areas of technology.

Examiner Actions

In 1981, the PTO started to use word processors in several of the patent examining groups. Word processors will ultimately be used in all the groups to eliminate handwritten first actions by the patent examiners. Use of this equipment will improve efficiency and quality in the examining groups.

Classification Information for PDL's

Patent Depository Libraries (PDL's), with one limited exception, maintain patents in patent-number order rather than by the more effective technology classification system used by the PTO. The PTO arranged, through a commercial contractor, to provide current classification information to the PDL's using online computer terminals. This will enable the PDL's to retrieve all classifications for a given patent number; retrieve all patent numbers for a given class/subclass; perform a keyword search of the Manual of Classification or class/subclass; and browse through the Manual of Classification.

Trademark Automation

The automated information system for the Trademark Operation reached the detailed design stage during FY 1981. When installed, the system will permit retrieval of all pertinent data on active registrations and pending applications and will feature automated searching and printing. The PTO purchased the terminals necessary to support the automated processes. By year's end, the programming and software acquisitions were under way in anticipation of initial implementation in 1982.

Assignment Search Records

The PTO automated most of the process of recording assignment documents. In addition to simplifying the search process, automating this system has virtually eliminated the problems associated with misfiled assignment abstracts and updating of the search file.

chapter five
PATENTS

PATENTS*

Patent Applications

The number of patent applications filed in FY 1981 set an all-time record with a total of 114,710 filings (excluding international filings in the U.S. Patent and Trademark Office as a receiving authority under the Patent Cooperation Treaty). This number represents an increase of 2,395 applications or 2 percent over FY 1980, which itself was a record year. Utility, plant, and reissue applications accounted for 107,513 of these filings. The other 7,197 applications filed were for design patents, which showed a 1 percent decrease in filings from FY 1980. Figure 4 illustrates historical trends in patent applications and patents issued. Figure 5 shows that the percentage of applications submitted by residents of foreign countries continues to increase and is now over 40 percent of all U.S. filings, up from 39 percent in FY 1980.

Patents Issued

The PTO issued 71,010 patents in FY 1981, a 16 percent increase over the previous year. Utility, plant and reissue patents accounted for 67,128 of this total, with 3,882 design patents being issued. The number of patents issued to residents of foreign countries, as shown in Figure 5, continued to increase and was 39 percent of all patents issued, compared with 37.7 percent of the patents issued in FY 1980.

Patent Pendency

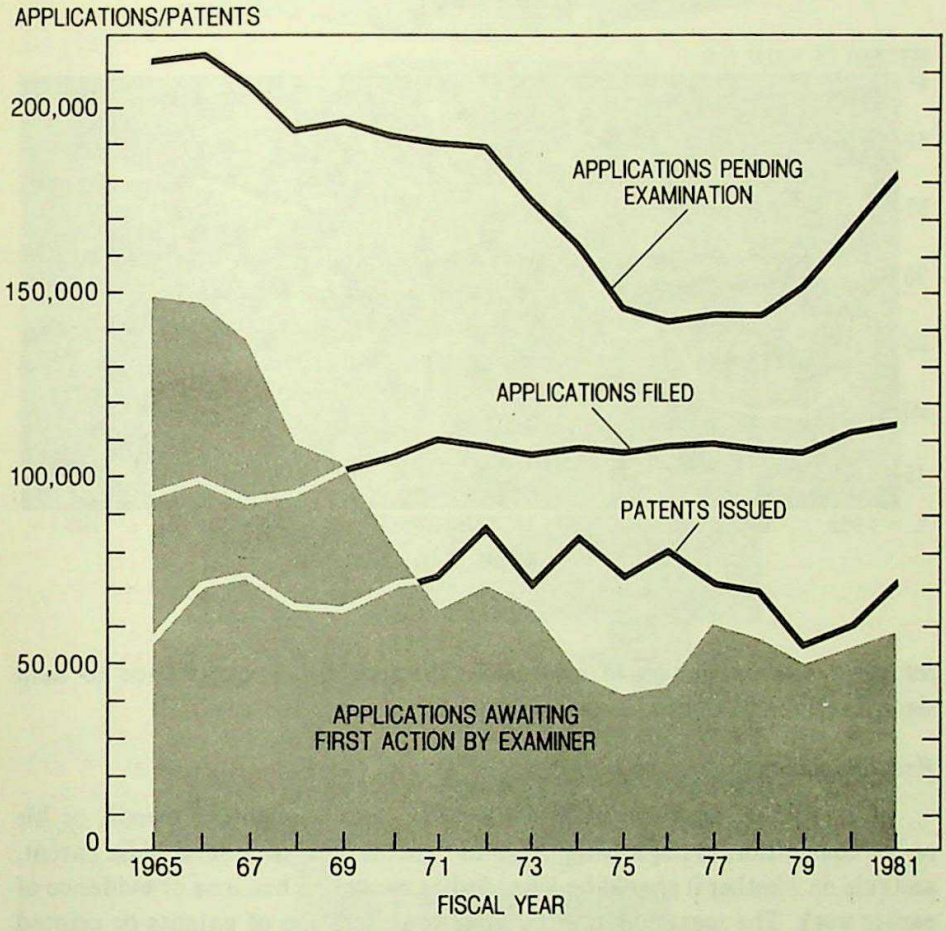
The time to process a patent application from filing to issue or abandonment is called the "patent pendency time". The average patent pendency time dropped slightly during FY 1981 to 22.4 months for utility, plant, and reissue patents (from 22.6 months the previous year). The average pendency time for design patents was 27.1 months.

Due to the continued increase in the number of applications filed in FY 1981 without a commensurate increase in the number of patent examiners, the backlog of applications in the examining corps increased by 19,268

* Statistical Tables 5 through 16, at the end of this report, contain the data on which the figures and the narrative in this chapter are based.

Figure 4

PATENT APPLICATIONS FILED, PENDING AND ISSUED (1965-1981)



for nondesign applications. The total Office backlog at the end of FY 1981 was 221,538 applications, up from 217,003 in FY 1980. The average time that it took for an applicant to get a first response from the PTO on the merits of an application went from 9 months to 11.6 months. Figure 6 is a flow chart showing the stages, and the FY 1981 pendency time for each stage, in the patent examining process. Figure 7 illustrates the trends in pendency time over the past 16 years.

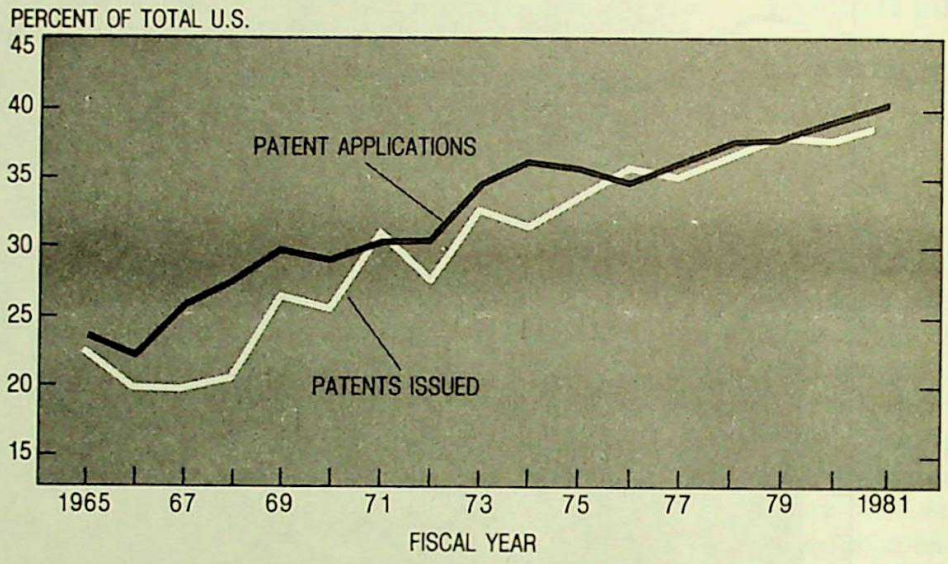
Patent Examiners

The PTO hired 80 new examiners in FY 1981. With 42 attritions from the patent examining corps, the number of examiners (excluding supervisors) totaled 867 at the end of FY 1981.

Under Plan 18/87, the PTO plans to hire 235 additional patent examiners in FY 1982 as well as additional clerks. It will take some time, of course,

Figure 5

U.S. PATENT APPLICATIONS FROM AND PATENTS ISSUED TO RESIDENTS OF FOREIGN COUNTRIES (1965-1981)



for these new examiners to gain enough training and experience to help significantly in stemming the rising backlog of applications.

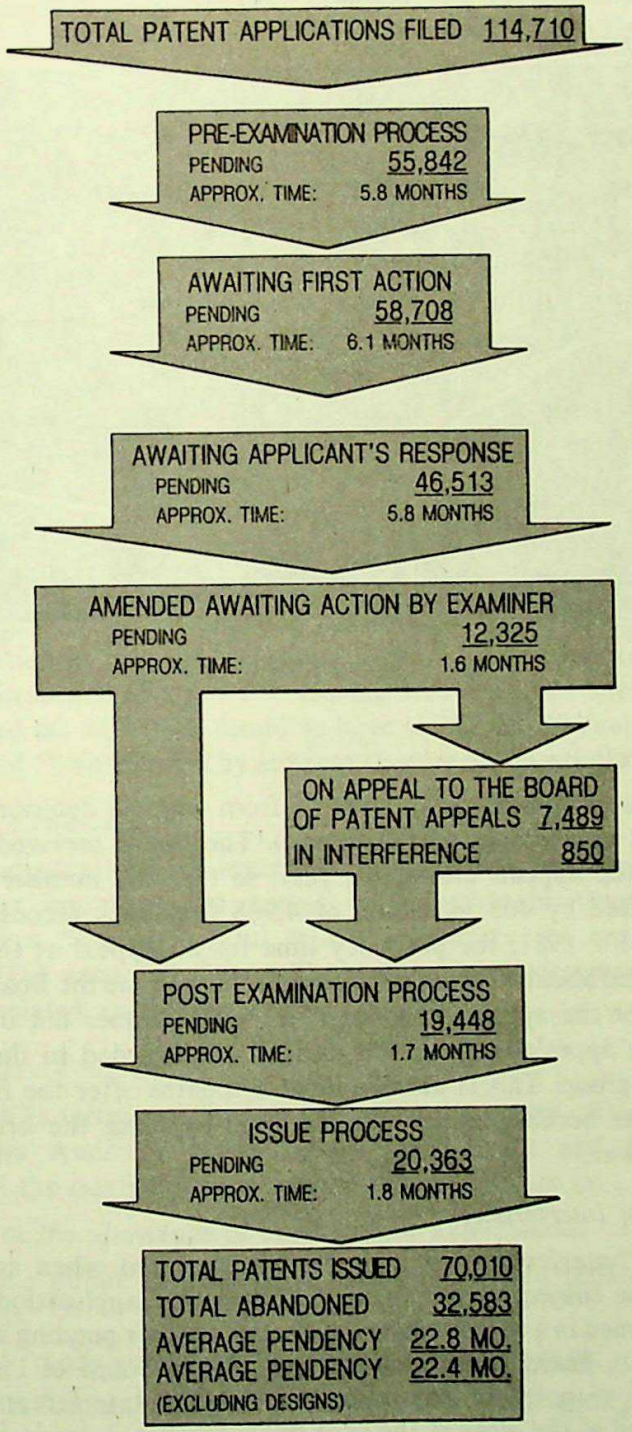
Reexamination

P.L. 96-517, enacted early in FY 1981, allows a patent owner, or his or her competitor, to request the PTO to "reexamine" an issued U.S. patent, and rule on whether it should be amended or cancelled because of evidence of earlier work. The reexamination includes consideration of patents or printed publications cited by the requester as the basis for reexamination. This procedure will be faster and considerably less expensive than resolution of patent validity issues in litigation. The procedure also permits a review of the patent and the cited art by a patent examiner who is familiar with the technology in question. This should benefit the courts in their handling of patent cases (See Table 10).

The legislation for reexamination became effective and permitted requests for reexamination to be filed beginning on July 1, 1981. By the end of FY 1981, the PTO had received 78 reexamination requests, of which 18 were filed by patent owners. Of the 78 cases, 30 were in litigation and 4 of the requests had been court ordered. A substantial new question of patentability was found, and reexamination ordered, in 32 cases. The PTO denied reexamination in two cases. (See Table 10).

Figure 6

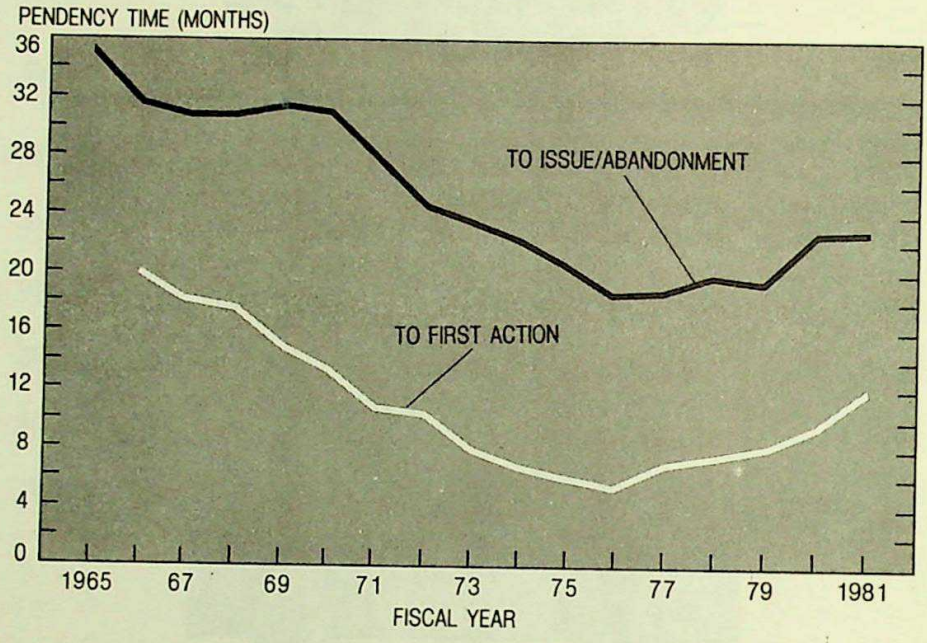
PATENT EXAMINING ACTIVITIES*



*This figure presents a simplified patent work-flow diagram with statistics on cases at various stages of processing at the end of FY 1981.

Figure 7

PENDENCY TIME OF PATENT APPLICATIONS (1965-1981)



Board of Appeals

The Board of Appeals hears appeals from adverse decisions of examiners on patent applications (see Table 11). The Board received 3,871 and disposed of 3,466 appeals during the year, so that the number of appeals pending increased by 405 to a total of 4,968 (excludes reconsiderations). At the end of FY 1981, the pendency time for an appeal at the Board of Appeals averaged about 17 months, starting from the time the Board obtained jurisdiction over the appeal. The Board of Appeals does not obtain jurisdiction over an appealed application until it is forwarded to the Board by the examining group. This is usually about 6 months after the filing of the notice of appeal because of the time involved in filing the brief and the examiner's answer.

Board of Patent Interferences

A patent "interference" is a proceeding declared when an applicant claims the same subject matter in his or her patent application as has already been claimed in a recently issued patent or another pending application. Interferences are heard and decided by the PTO's Board of Patent Interferences, which disposed of 268 cases in FY 1981. Interferences pending before the Board at the close of the year totaled 531, a decrease of 57 cases from the backlog at the end of FY 1980. Of those pending, 96 cases were at the final hearing stage, awaiting a final decision by the Board (see Table 11).

Supreme Court Decisions Affecting Patents

Two cases decided by the Supreme Court in March 1981 significantly clarified a long-standing question whether the Patent Act (35 U.S.C. 101) authorizes the granting of patents for computer-program-related inventions. The Supreme Court ruled that the statute does authorize the grant of a patent for the computer-program-related invention in *Diamond* v. *Diehr,* and affirmed a lower court decision to the same effect in *Diamond* v. *Bradley.*

Reissue and Protested Applications

The PTO completed its fourth full year of operation under the revised reissue rules, which afford patent owners the opportunity to have patents considered in light of information not considered at the time of initial examination. During the year, 538 reissue applications were filed, which represents a 16 percent decrease from the filings of the prior year.

Protests were filed against 125 pending patent applications. Protests filed in reissue applications made up 85 percent of the total.

Duty of Disclosure

Two hundred and eight applications, including many reissue and protested applications, were referred to the Assistant Commissioner for Patents for investigation of possible violations of the duty of applicants to disclose material information to the PTO. During FY 1981, 121 such applications were disposed of, with four found to have violations, 39 found not to have violations, and 78 abandoned by applicant before the question was considered.

Accelerated Examination

Patent applications for inventions that enhance the quality of the environment or contribute to energy conservation or development may be accorded a "special" status which accelerates the examination process. The PTO accorded "special" status to 19 environment-related and 148 energy-related applications.

Quality Review Program

The PTO's Office of Quality Review is a separate office reporting directly to the Assistant Commissioner for Finance and Planning. The objectives of the quality review program for patents are to:

- prevent the allowance of unpatentable applications;
- improve public confidence in the certainty and reliability of issued patents;
- detect trends away from normal examining practice;
- provide feedback information to patent examining corps;
- emphasize to patent examining corps the importance of quality;
- compile data on the "quality" of the patent examination process.

The quality review program does not measure any defects in quality due to lack of search file integrity and takes into account the quality of search only to a limited degree.

The quality review program samples 4 percent of allowed applications (i.e., applications approved for a grant of a patent) and provides data on:

- the patentability of the allowed claims;
- the correctness of the field of search and the classification of the application;
- compliance with current practices and procedures.

By the end of FY 1981, after nearly 7½ years of operation of the program, 16,562 applications had been subjected to a patentability review. Of these, 741 (4.5 percent) were returned to the examining groups as having one or more claims clearly unpatentable. Prosecution was reopened in 645 (87 percent) of the 741 applications returned to the examiners. In addition, the prior art search was considered incomplete in 1,298 (8 percent) of the applications reviewed. Prosecution was reopened in 82 of the 1,298 (6 percent) applications returned for additional searching. Prosecution had therefore been reopened in a total of 727 applications through FY 1981 as a result of the quality review program for patents.

During the first nine months of FY 1981, 3 percent of the sampled applications were found to be allowed in error, as compared to 7 percent in FY 1975. For the same 9-month period of FY 1981, prior art searches were found to be incomplete in 5 percent of the applications reviewed as compared to 11 percent in FY 1975. On the basis of quality review program annual findings, 66 patents out of each 1,000 issued in FY 1975 contained at least one clearly unpatentable claim, while that number was down to 27 per 1,000, based on the first 9 months of FY 1981.

These statistics suggest that the quality of patents allowed by examiners has been improving since the 1970's. Quality review statistics provide useful feedback to management on the reliability of patents issued and thus supplement the normal quality review performed by the immediate supervisors of patent examiners. These supervisors, of course, play a key role in monitoring patent quality.

Patent Cooperation Treaty Functions

The Office entered its fourth year as a receiving office under the Patent Cooperation Treaty (PCT). The PCT is an international agreement between 30 member countries (in 1982 this will increase to 32 members) which permits an inventor or a business to file an international application in the United States with the same effect as an application in as many member countries of the PCT as are designated. In FY 1981, the PTO received 1,797 international applications, an increase of 9.1 percent over the previous year. Under PCT, the PTO also serves as an "International Searching Authority" for international applications filed in the United States and Brazil. In this capacity, the PTO completed 2,045 international search reports dur-

ing FY 1981. The PTO also received notification that it had been "designated" in 2,640 international applications filed in other PCT "Receiving Offices" around the world. The PTO eliminated significant processing backlogs in PCT U.S. "Receiving Office" and "Designated Office" operations.

Technology Assessment and Forecast

The Patent and Trademark Office's Office of Technology Assessment and Forecast (OTAF) released its third "Patent Profile," one of a series of publications designed to review patent activity in critical or high-interest technologies. This publication, *Microelectronics I,* is the first of several which will focus on various aspects of the pivotally important microelectronics technology. Each issue of this series contains data on patent numbers, titles, active companies, and independent inventors in a particular technology. In addition, the *Microelectronics I* report contains citation data and patent first-page reproductions.

In FY 1981, OTAF prepared 190 special technology assessment reports for public and private organizations. OTAF reached an agreement with the National Technical Information Service (NTIS) which will enable greater public use of patent information. Under the agreement, NTIS will provide to the public, on a cost reimbursable basis, OTAF-prepared patent bibliographic data products and technology assessments based on patented technology.

OTAF enhanced its base of patent data during FY 1981 by the addition of information relating to patents granted by 25 foreign countries. OTAF also completed work on a technology assessment of patenting in biotechnologies, and prepared two assessment reports at the request of the World Intellectual Property Organization. These reports, "Ocean Kinetics—An Alternative Energy Source," and "Geothermal and Other Natural Terrestrial Heat Energy Power Systems," were for use at the United Nations Conference on New and Renewable Sources of Energy.

Patent Search File Integrity

The completeness of the patent search file is critical to the reliability of an issued patent. Between 1978 and 1980, under the file integrity program, over 2.5 million U.S. patents in the most active subclasses were reviewed and the accuracy of the associated computer record improved. During FY 1981, the PTO reviewed 780,000 search file documents, including U.S. and foreign patents and nonpatent literature. Approximately 22,000 patent copies were added to the file in FY 1981 to replace missing or mutilated documents.

The PTO initiated the model search room program as another way to review search file integrity. Under this program, all the references in six examiner search rooms will be reviewed for completeness, and the accuracy of the computer record will be improved. In FY 1981, one search room was reviewed completely and another started. The search rooms chosen will be two each from the electrical, chemical and mechanical art groups. When

the model search room reviews are completed, those rooms will be used for further detailed studies relating to file content, use, and maintenance. In some of the search rooms, controls will be imposed to limit degradation of the integrity of the files, and the effectiveness of those controls will be evaluated.

Reclassification

Selected portions of the patent search file are reviewed periodically to determine the need for new classifications better corresponding to the current state of technology. These ongoing reclassification programs constitute an analysis of all patents in a given technology. The PTO then restructures the classification system for the new technology to increase the access to and reliability of the patent search file. FY 1981 reclassification programs established 5,287 new subclasses, and involved approximately 493,000 U.S. and foreign patents (see Table 16 for details). Seventeen percent fewer patents were reclassified during the FY 1981 than the previous year, primarily due to support-cost increases and funding and staffing decisions.

Patent Depository Libraries

Three State university libraries acquired collections of U.S. patents in numerical order and were designated Patent Depository Libraries. They are the University Library of the University of Delaware, Newark, Del.; the Science Library, Arizona State University, Tempe, Ariz.; and, the Troy H. Middleton Library, Louisiana State University, Baton Rouge, La. The total number of Patent Depository Libraries in the United States is now 37, an increase of 15 within the last 5 years. Figure 8 lists the Patent Depository Libraries.

A table showing the location of the libraries and a point of contact in each is published as a continuing notice in the Official Gazette to promote public awareness of the Patent Depository Libraries. Publishers of private journals and journals of technical and professional societies are encouraged to republish this information.

The PTO awarded a contract in FY 1981 to provide the Patent Depository Libraries free and unlimited access during 1982 to various PTO classification data bases. Participating libraries will have on-line access to this data to acquire lists of all patents in any given classification, to find the classification of a given patent, to search keywords of the Manual of Classification to identify classifications for searching, and to view the subclasses in a classification in their hierarchical relationships. This system, called CASSIS (acronym for Classification and Search Support Information System), will become operational early in 1982. It will extend to users of patent collections in 25 States the type of information which is provided users of the Public Search Room in the Patent and Trademark Office.

The PTO held a Depository Library conference in June 1981 which was attended by representatives of most of the libraries.

Figure 8.

PUBLIC PATENT DEPOSITORY LIBRARIES

ALABAMA
Birmingham Public Library

*ARIZONA
Tempe—Science Library
(Arizona State University)

CALIFORNIA
Los Angeles Public Library
Sacramento—California State Library
Sunnyvale—Patent Information
Clearinghouse

COLORADO
Denver Public Library

*DELAWARE
Newark—University of Delaware
Library

GEORGIA
Atlanta—Price Gilbert Memorial
Library (Georgia Institute
of Technology)

ILLINOIS
Chicago Public Library

*LOUISIANA
Baton Rouge—Troy H. Middleton
Library (Louisiana State Univ.)

MASSACHUSETTS
Boston Public Library

MICHIGAN
Detroit Public Library

MINNESOTA
Minneapolis Public Library and
Information Center

MISSOURI
Kansas City—Linda Hall Library
St. Louis Public Library

NEBRASKA
Lincoln—Eng'g. Library
(University of Nebraska—Lincoln)

NEW HAMPSHIRE
Durham—University of New Hampshire Library

NEW JERSEY
Newark Public Library

NEW YORK
Albany—N.Y. State Library
Buffalo & Erie County Public Library
New York Public Library
(The Research Libraries)

NORTH CAROLINA
Raleigh—D.H. Hill Library
(N.C. State University)

OHIO
Cincinnati & Hamilton County
Public Library
Cleveland Public Library
Columbus—Ohio State University
Libraries
Toledo/Lucas County Public Library

OKLAHOMA
Stillwater—Oklahoma State
University Library

PENNSYLVANIA
Philadelphia—Franklin Institute
Library
Pittsburgh—Carnegie Library
University Park—Pattee Library
(Pennsylvania State University)

RHODE ISLAND
Providence Public Library

TENNESSEE
Memphis & Shelby County Public Library

TEXAS
Dallas Public Library
Houston—The Fondren Library
(Rice University)

WASHINGTON
Seattle—Eng'g. Library
(University of Washington)

WISCONSIN
Madison—Kurt F. Wendt Eng'g.
Library (University of Wisconsin)
Milwaukee Public Library

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* New patent depository libraries added in FY 1981.

The existence of the 37 Patent Depository Libraries puts approximately 42 percent of the population of the continental United States within commuting distance of a patent collection.

Distribution of Computer Patent Data Bases

The PTO actively supported distribution of computer-readable patent data bases to the public through an agreement with the National Technical Information Service (NTIS). The data bases included:

- Current patent full-text files produced weekly;
- Current patent bibliographic files produced weekly;
- Retrospective patent full-text and biliographic files for patents issued from August 1980 through December 1980.
- Patent classification file containing patent number, class and subclass information on all U.S. patents.

The public may now acquire copies of these and other patent-related files directly from NTIS.

Search Data Bases in Public Search Room

A non-profit organization, the Intellectual Property Owners, Inc., worked with the PTO to enable FY 1982 testing of the usefulness of an on-line patent search data base. This data base, the Pergamon VIDEO PATSEARCH system, was installed in the Public Search Room in early FY 1982 and will enable the public to use computer technology to search the patent files.

Manual of Patent Examining Procedure (MPEP)

Two major new sections were added to the MPEP to provide guidelines for the handling of certain cases. One section deals with the new reexamination procedures to implement the new legislation in effect starting July 1, 1981.

The other new section provides guidelines for handling applications involving mathematical equations, mathematical algorithms and computer programs. This section was based on the Supreme Court's 1981 decisions in *Diamond v. Diehr* and *Diamond v. Bradley,* and on various decisions of the Court of Customs and Patent Appeals which dealt with an analysis of such applications in light of 35 U.S.C. 101.

National Inventors Day

The Patent and Trademark Office celebrated the Ninth Annual National Inventors Day with the induction of four individuals into the National Inventors Hall of Fame on February 8. They were:

- Harold Stephen Black, born in Leominster, Mass., honored for his "Negative Feedback Amplifier," Patent No. 2,102,671;

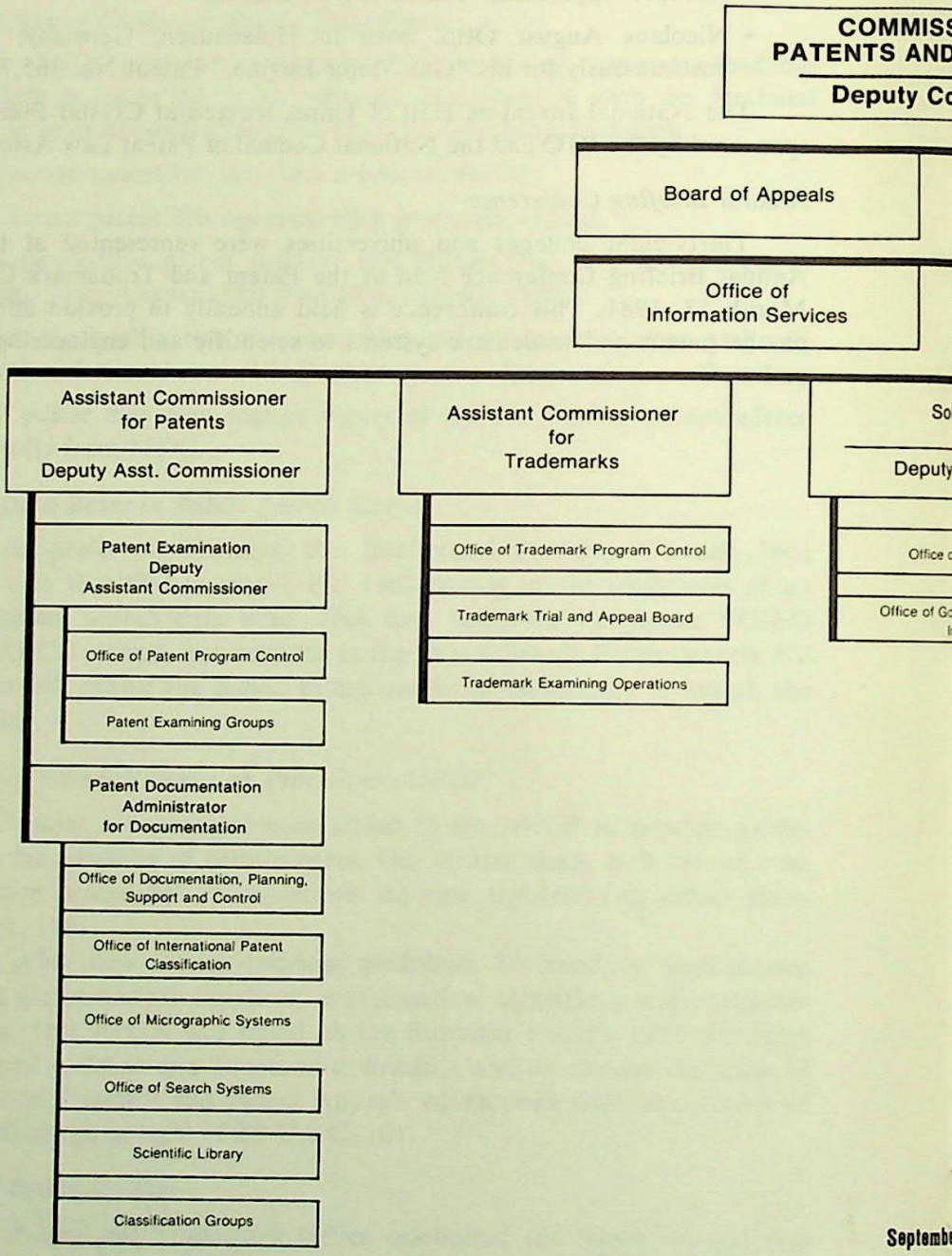
- Chester F. Carlson, born in Seattle, Wash., honored posthumously for "Electrophotography," Patent No. 2,297,691;
- Charles Stark Draper, born in Windsor, Mo., honored for his "Gyroscopic Apparatus," Patent No. 2,752,790;
- Nicolaus August Otto, born in Holzhausen, Germany, honored posthumously for his "Gas Motor Engine," Patent No. 365,701.

The National Inventors Hall of Fame, located at Crystal Plaza, is cosponsored by the PTO and the National Council of Patent Law Associations.

Annual Briefing Conference

Thirty-eight colleges and universities were represented at the 14th Annual Briefing Conference held at the Patent and Trademark Office on March 13, 1981. This conference is held annually to provide information on the patent and trademark systems to scientific and engineering faculty and staff.

U.S. DEPARTMEN
Patent and Tr



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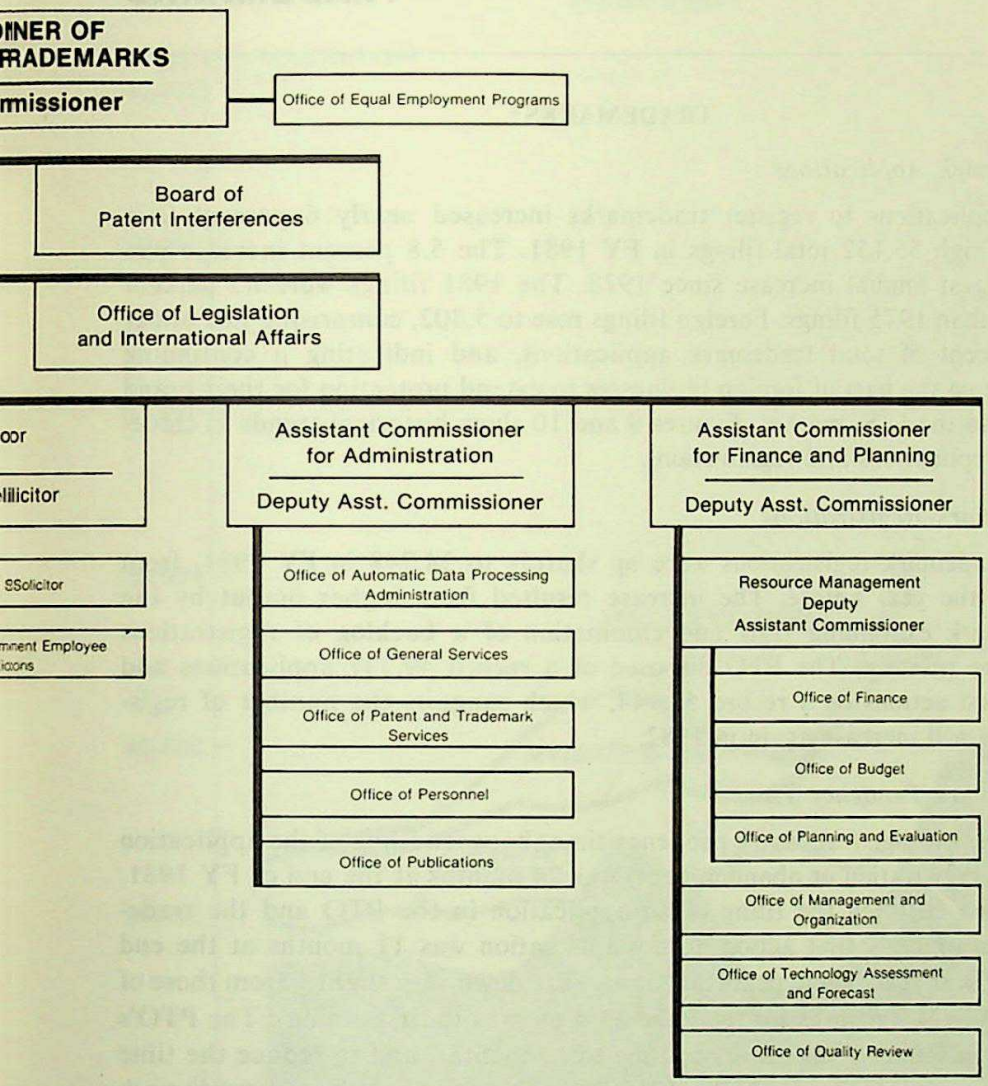


chapter six
TRADEMARKS

TRADEMARKS*

Trademark Applications

Applications to register trademarks increased nearly 6 percent to a record high 55,152 total filings in FY 1981. The 5.8 percent increase was the biggest annual increase since 1978. The 1981 filings were 63 percent higher than 1975 filings. Foreign filings rose to 5,402, comprising just under 10 percent of total trademark applications, and indicating a continuing interest on the part of foreign businesses to extend protection for their brand names to the U.S. market. Figures 9 and 10 show historical trends in trademark applications and registrations.

Trademark Registrations

Trademark registrations were up sharply to 34,748 in FY 1981, from 16,366 the year before. The increase resulted from higher output by the trademark examining staff and elimination of a backlog of registrations awaiting printing. The PTO disposed of a record 49,337 applications and took first actions on a record 57,944, which suggests the number of registrations will increase again in 1982.

Trademark Pendency Time

The average trademark pendency time (between filing of the application and its registration or abandonment) was 24 months at the end of FY 1981. The time between the filing of an application in the PTO and the trademark examiner's first action on the application was 11 months at the end of the fiscal year. These pendency times were down very slightly from those of FY 1980 (24.9 months for total and 11.5 months to first action). The PTO's goal is to reduce total pendency time to 13 months, and to reduce the time to first action to 3 months by FY 1985. The total number of trademark cases in the PTO rose to a record 116,598, up from 110,966 a year earlier. Figure 11 illustrates the stages in the trademark examining process, and the pendency times associated with each. Figure 12 shows historical trends in trademark pendency times.

* Statistical Tables 17 through 23, in the appendix, contain the data on which the figures and the narrative in this section are based.

Figure 9

TRADEMARK APPLICATIONS FILED AND PENDING AND TRADEMARKS REGISTERED (1965-1981)

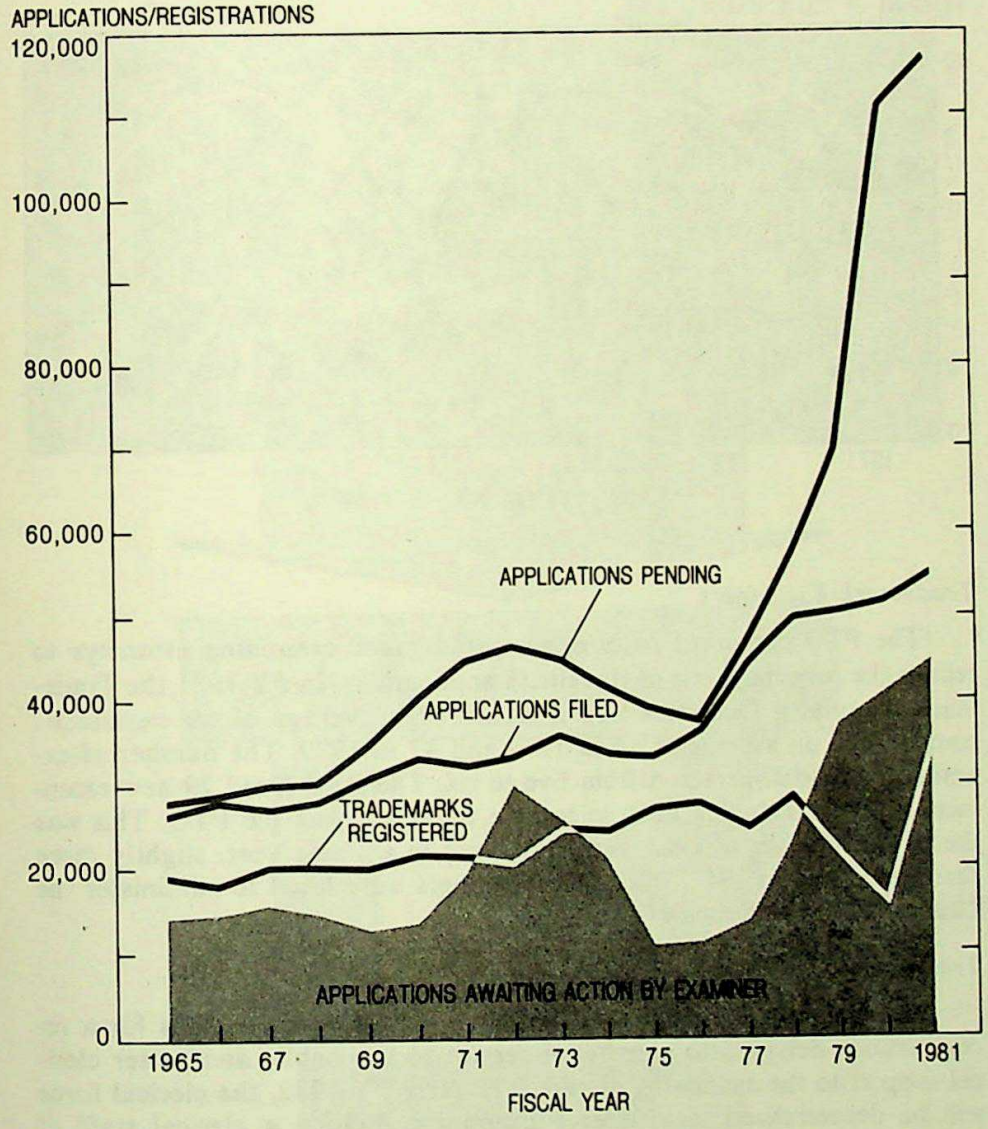
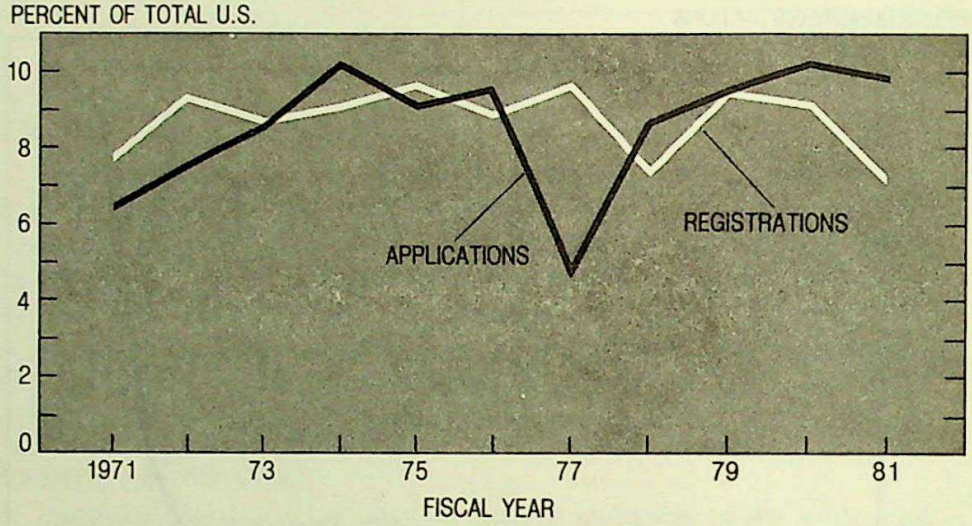


Figure 10

U.S TRADEMARK APPLICATIONS AND REGISTRATIONS FROM ABROAD (1971-1981)



Trademark Examiners

The PTO continued to hire more trademark examining attorneys to reduce the pendency time of trademark applications. In FY 1981 the Trademark Examining Operation had a record high average of 80 examiners, compared to an average of 66 in 1980 and 47 in 1979. The number of examining divisions increased from five to six. The PTO hired 29 new examiners in 1981, including hires to replace those who left the PTO. This was the largest number of examiners ever hired in a single year, slightly more than were hired in 1947, when new examiners were hired to administer the Lanham Act, which took effect that year.

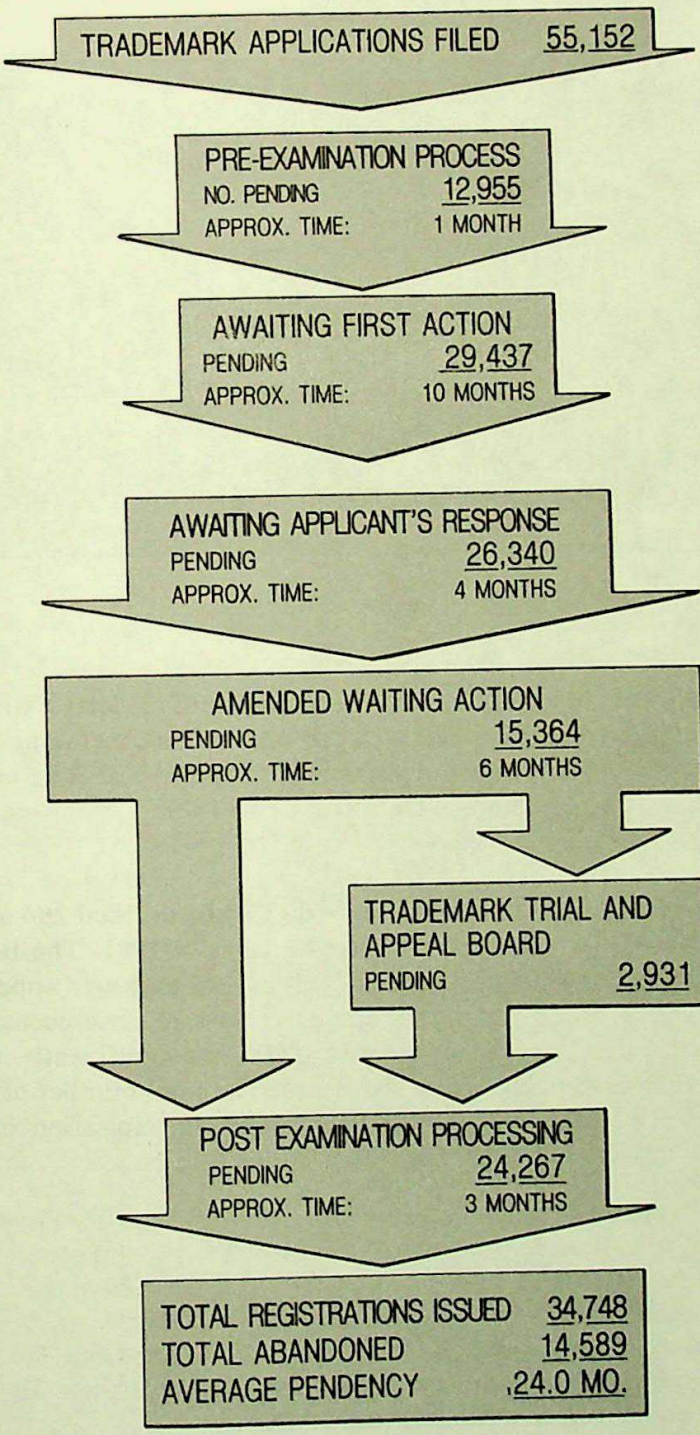
Trademark Services

The Trademark Examining Operation completed final plans for a reorganization designed to give better service to the public and better clerical support to the examining divisions. In early FY 1982, the clerical force will be decentralized to give each examining division a clerical staff of about five employees directly responsible to it. This arrangement is expected to give better telephone receptionist service, better typing support for examiners, and better control over the location of applications being examined. The divisions also obtained upgraded word processors for typing PTO actions written by the examining attorneys. The PTO acquired the LEXIS computerized legal research system for use by trademark examiners and expanded the examiners' Trademark Law Library.

Delays were reduced in some clerical processing functions; notably, the time was shortened for putting drawings of newly filed trademark ap-

Figure 11

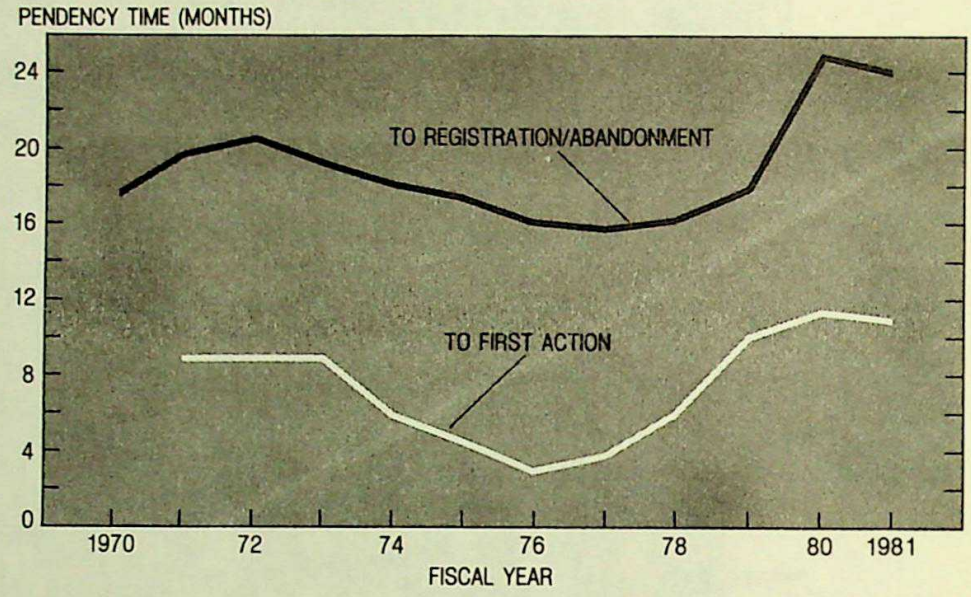
TRADEMARK EXAMINATION ACTIVITIES*



* This figure presents a simplified trademark work-flow diagram with statistics on cases at various stages of processing at the end of FY 1981.

Figure 12

PENDENCY TIME OF TRADEMARK APPLICATIONS (1970-1981)



plications in the Trademark Search Room. Substantial delays still existed at the end of the fiscal year in several trademark services, including provision of certified copies of trademark registrations to the public. The examining operation plans to hire additional clerical staff in 1982.

Trademark Trial and Appeal Board

The Trademark Trial and Appeal Board (TTAB) decided 294 adversary proceedings and 51 *ex parte* appeals after hearings in 1981. The Board disposed of 1,123 adversary proceedings as well as 126 *ex parte* appeals prior to hearing. The influx of oppositions and extensions of time occasioned by increased publication of marks in the Official Gazette significantly increased the number of cases pending before the Board. The total number of pending cases rose to 2,944 (excluding those cases awaiting expiration of appeal period) from 2,298 in FY 1980. See Table 20 for details.

chapter seven
OTHER ACTIVITIES

OTHER ACTIVITIES

Equal Employment Programs

During FY 1981, the PTO's Office of Equal Employment Programs prepared the following:

- an affirmative action program for the handicapped and disabled veterans;
- a guide to assist PTO management in the development, implementation, control, and monitoring of the Upward Mobility Program;
- a Federal Equal Opportunity Recruitment Program plan; and
- a PTO work force profile analysis in conjunction with development of a Multi-Year Affirmative Action Program Plan for 1982-1986.

The PTO doubled its 6-month goal (March 31-September 30, 1981) for hiring handicapped persons with targeted disabilities. The PTO also made progress in equal employment opportunities for minorities and women, due to expanded recruitment efforts, increased attention to the Upward Mobility Program, and increased commitment to the Affirmative Action Program.

Service to the Public

The PTO improved service to the public in the following ways:

- reduced the number of outstanding official searches for lost files by 50 percent;
- reduced the time required to record a patent assignment from nearly 100 to about 60 days;
- overcame delays in printing the Trademark Official Gazette and trademark certificates, so that the backlog was eliminated and the Official Gazette is available to the public on the day of issue;
- Reduced response time for filling requests for abandoned patent and trademark files and registered trademark files from 3-10 days to about 1.5 days by installing a more efficient filing and retrieval system.

appendix

STATISTICAL TABLES

Table 1.—OPERATING COSTS

(In Thousands of Dollars)

	1979	[1]1980	1981
OPERATING UNITS			
Patent Process	$58,374	$75,147	$80,819
Trademark Process	4,547	6,643	7,992
Information Dissemination	33,308	21,958	24,311
Total Operating Units Costs	96,229	103,748	113,122
SALARIES AND EXPENSES			
Personnel Compensation	65,583	70,238	76,201
Personnel Benefits	6,181	6,259	6,836
Printing and Reproduction	11,394	11,619	15,748
Other Costs	13,071	15,632	14,337
Total Salaries and Expenses	$96,229	$103,748	$113,122

[1] Several changes were made in reporting costs for FY 1980. Most significant was a shift of $11,619,000 in printing costs from Information Dissemination to the Patent Process and Trademark Process.

Table 2.—TOTAL CONGRESSIONAL APPROPRIATIONS[1]

(1972-1981)

Fiscal Year	Total Actual Appropriation (Including Supplemental Appropriations[2])	Appropriation Changes[3]
1972	62,372	951
1973	67,280	1,247
1974	71,982	921
1975	77,566	-446
1976[4]	85,350	1,624
1977[4]	89,400	-1,497
1978	94,321	1,458
1979	96,654	-1,692
1980	104,833	32
1981	[5]116,150	3,809

[1] In thousands of dollars.

[2] "Supplemental Appropriations" are the funding approved by the Congress to be added to the PTO's regular appropriation to cover certain changed circumstances—most commonly pay increases.

[3] "Appropriation Changes" represent the changes in funding level from the previous fiscal year, after pay increases and other uncontrollable cost increases have been taken into account.

[4] The Transition Quarter, July 1, 1976, to September 30, 1976, has been omitted.

[5] This amount was obligated by the end of FY 1981. Using the cost accrual method of accounting, operating costs by the end of FY 1981, as shown in Table 1, were $113,122,000.

Table 3.—END OF YEAR EMPLOYMENT[1]

(1975-1981)[2]

	1975	1976	1977	1978	1979	1980	1981
OPERATING UNITS:[3]							
Information Dissemination	926	953	867	823	788	697	732
Patent Process	1,899	1,829	1,788	1,795	1,719	1,671	1,776
Trademark Process	182	173	167	173	196	215	247
Total Operating Units Employment	3,007	2,955	2,822	2,791	2,703	2,583	2,755
PERSONNEL STAFFING:							
Patent Professional	1,118	1,047	1,063	1,064	995	949	985
Trademark Professional	73	71	72	68	79	88	98
All Others	1,816	1,837	1,687	1,659	1,629	1,546	1,672
Total Personnel Staffing	3,007	2,955	2,822	2,791	2,703	2,583	2,755

[1] Total paid employment, including full time permanent and others.
[2] The Transition Quarter, July 1, 1976, to September 30, 1976, has been omitted.
[3] The names of the PTO activities were changed in FY 1981, but the activities remained essentially the same.

Table 4.—INCOME FROM FEES

(In Thousands of Dollars)

Source of Income	1978	1979	1980	1981
PATENT-RELATED FEES				
Filing Fees				
Patent Applications	$8,948	$8,861	$9,400	$10,004
Design Applications	150	149	152	159
Patent Reissue Applications	56	56	52	44
Disclosure Documents	106	98	98	90
Issue Fees				
Patent	9,978	9,166	8,905	10,030
Design	114	103	122	149
PCT Application and Search Fees	24	178	297	346
Disclaimers	27	27	24	24
Attorney Registration and Certificates	37	43	36	34
Total Patent-Related Fees	19,440	18,681	19,086	20,880
TRADEMARK-RELATED FEES				
Applications	1,706	1,738	1,829	2,000
Oppositions and Cancellations	61	47	40	50
Renewals	142	158	166	145
Use/Non-Use Affidavits	146	154	164	172
Total Trademark-Related Fees	2,055	2,097	2,199	2,367
SERVICE AND RELATED FEES				
Appeals, including briefs	884	715	729	707
Certificates of Correction	37	43	38	45
Certification of Records	113	105	101	106
Making, Mounting, Correcting and Comparing Drawings	232	237	236	214
Petitions	41	40	38	36
Printed Copies	1,749	1,707	1,597	1,826
Recording Assignments	1,563	1,556	1,653	1,836
Reproduction of Records	1,345	887	753	814
Special Services on Orders	150	160	187	213
Subscription Service for Copies	23	21	19	21
Total Services and Related Fees	6,137	5,471	5,351	5,818
MISCELLANEOUS OTHER FEES[1]	90	862	556	428
TOTAL INCOME FROM FEES	$27,722	$27,111	$27,192	$29,493

[1] Approximately 35 types of fees.

Table 5.—SUMMARY OF PATENT EXAMINING ACTIVITIES

(As of September 30, 1981)

Patent Examining Activity	1979	1980	1981	Average 1972-81
PATENT APPLICATIONS FILED				
Utility[1]	99,516	104,219	106,828	102,299
Reissue	657	641	538	503
Plant	166	186	147	156
Design	7,070	7,269	7,197	6,560
Total Patent Appls. Filed	107,409	112,315	114,710	109,518
FIRST ACTIONS				
Design	6,200	7,278	7,182	6,044
All Others	96,091	88,218	83,497	102,115
PATENT APPLICATIONS ALLOWED[2]				
Design	3,953	4,639	5,311	4,221
All Others[3]	63,661	60,611	58,187	69,021
Total Patent Appls. Allowed	67,614	65,250	63,498	73,242
PATENT APPLICATIONS ABANDONED				
Design	1,889	2,128	2,525	1,862
All Others[3]	30,260	29,106	30,058	34,828
Total Patent Appls. Aband.	32,149	31,234	32,583	36,690
TOTAL PATENT APPLICATION DISPOSALS[4]	99,763	96,484	96,081	109,932
PATENTS ISSUED[5]				
Utility	51,686	56,618	66,617	68,424
Reissue	312	305	343	349
Plant	151	137	168	169
Design	3,269	4,167	3,882	3,869
Total Patents Issued	55,418	61,227	71,010	72,811
PATENTS WITHHELD FROM ISSUANCE[6]	1,630	1,712	2,004	2,137
PENDENY TIME OF AVERAGE PATENT APPLICATION[7]	19.4	22.6	22.4	—
REEXAMINATIONS REQUESTED[8]	—	—	78	—
REEXAMINATION CERTIFICATES ISSUED	—	—	0	—
PCT SEARCH REPORTS PREPARED[9]	471	1,442	2,045	—
PCT INTERNATIONAL APPLICATIONS RECEIVED	971	1,647	1,797	—

[1] Chemical, electrical, and mechnical applications.

[2] "Allowed Patent Applications" are applications awaiting issuance (i.e., publication) as patents.

[3] Utility, plant, and reissue applications.

[4] Disposals by examiners—i.e., the sum of applications allowed and applications abandoned. Final disposals can be obtained by adding patents issued and applications abandoned. The Office measures the productivity of examiners in "production units", formerly called "balanced disposals." Production units are obtained by averaging first actions and examiners disposals.

[5] Excludes withdrawn numbers.

[6] For nonpayment of final issue fee (35 USC 151).

[7] Average time (months) between filing and issuance/abandonment of utility, plant, and reissue applications (excluding designs).

[8] Reexamination was instituted on July 1, 1981, in accordance with provisions of Patent Law 96-517.

[9] PCT entered into force on January 24, 1978, and applications were accepted for filing beginning June 1, 1978.

Table 6.—PATENT APPLICATIONS FILED

(1962–1981)

Year	Utility[1]	Design	Plant	Reissue	Total
1962	84,864	4,963	131	270	90,228
1963	84,620	4,841	149	277	89,887
1964	87,482	5,067	147	207	92,903
1965	88,908	5,319	89	237	94,553
1966	93,022	5,187	103	266	98,578
1967	88,167	4,774	100	241	93,282
1968	90,252	4,889	107	304	95,552
1969	96,342	5,432	103	376	102,253
1970	100,116	5,722	113	344	106,295
1971	103,733	6,057	161	266	110,217
1972	102,663	6,358	166	293	109,480
1973	100,900	5,541	109	382	106,932
1974	103,479	4,948	109	391	108,927
1975	101,283	5,751	163	465	107,662
1976[2]	101,807	6,838	144	438	109,227
1977[2]	101,821	7,186	202	564	109,773
1978	100,473	7,440	171	660	108,744
1979	99,516	7,070	166	657	107,409
1980	104,219	7,269	186	641	112,315
1981	106,828	7,197	147	538	114,710

[1] Chemical, electrical, and mechanical applications.
[2] The Transition Quarter, July 1, 1976, to September 30, 1976, has been omitted.

Table 7.—SUMMARY OF PENDING PATENT APPLICATIONS

(As of September 30, 1981)

Stage of Processing	Design Applns.	All Pat. Applns.[1]
IN PREEXAMINING PROCESSING	1,243	55,842
UNDER EXAMINATION		
Amended, Awaiting Action by Examiner	662	12,325
Awaiting First Action by Examiner	8,334	58,708
Awaiting Response by Applicant	1,965	[2]46,513
In Interference	3	850
On Appeal	74	7,489
Total Under Examination	11,038	125,885
IN POSTEXAMINATION PROCESSING		
Awaiting Payment of Issue Fee	1,367	16,886
D-10's (Secret Cases in Condition for Allowance)	0	2,562
Total in Postexamination Processing	1,367	19,448
IN ISSUE PROCESSING		
Awaiting Printing Preprocessing[3]	1,049	9,151
Awaiting Printing	1,000	11,212
Total in Issue Processing	2,049	20,363
TOTAL IN PATENT AND TRADEMARK OFFICE	15,697	221,538

[1] Including utility, reissue, design, and plant patent applications.
[2] Inventory adjustment.
[3] In the Patent and Trademark Office, with the issue fee paid.

Table 8.—PATENT APPLICATIONS PENDING[1]

(1962–1981)

Year	Awaiting Action by Examiner[2]	Total Applns. Pending[3]	Year	Awaiting Action by Examiner[2]	Total Applns. Pending[3]
1962	102,833	203,497	1972	70,477	189,177
1963	119,946	215,577	1973	64,940	175,281
1964	129,151	226,066	1974	47,411	162,447
1965	149,284	212,416	1975	41,916	146,464
1966	147,664	214,664	1976[4]	43,776	142,379
1967	136,672	205,768	1977[4]	60,706	144,542
1968	109,509	194,087	1978	57,031	144,056
1969	103,704	[5]196,338	1979	50,085	151,702
1970	81,548	192,575	1980	64,289	167,533
1971	64,890	190,103	1981	71,033	181,727

[1] Pending at end of period indicated including utility, reissue, plant, and design applications. Does not include allowed applications.
[2] Through 1965, includes applications having suspended actions.
[3] Applications awaiting examination, including those in preexamination processing.
[4] The Transition Quarter, July 1, 1976, to September 30, 1976, has been omitted.
[5] Revised.

Table 9.—PATENTS ISSUED[1]

(1962–1981)

Year	Utility[2]	Design	Plant	Reissue	Total
1962	51,065	2,336	88	190	53,679
1963	53,958	2,411	114	215	56,698
1964	44,050	3,019	147	203	47,419
1965	52,914	2,979	127	204	56,224
1966	66,243	3,638	105	238	70,224
1967	70,028	2,840	102	180	73,150
1968	61,599	3,539	67	185	65,390
1969	61,957	2,991	80	201	65,229
1970	66,339	3,401	80	311	70,131
1971	[3]70,387	3,097	77	222	[3]73,783
1972	83,221	3,032	170	264	86,687
1973	[4]67,552	3,441	146	274	[4]71,413
1974	79,300	4,439	211	367	84,317
1975	[5]70,179	3,632	155	398	[5]74,364
1976[6]	[5]75,325	4,781	195	434	[5]80,735
1977[6]	67,972	4,261	164	435	72,832
1978	65,963	3,797	194	366	70,320
1979	51,686	3,269	151	312	55,418
1980	56,618	4,167	137	305	61,227
1981	66,617	3,882	168	343	71,010

[1] Excludes withdrawn numbers beginning with FY 1978.
[2] Chemical, electrical, and mechanical applications.
[3] Does not include 1,300 voided numbers.
[4] Does not include 1,356 voided numbers.
[5] In 1975, under the trial voluntary protest program (now abolished), an additional 667 applications were published but not issued: in 1976, there were 1,303 published but not issued.
[6] The Transition Quarter, July 1, 1976, to September 30, 1976, has been omitted.

Table 10.—REEXAMINATION—FY 1981

(July 1, 1981–September 30, 1981)[1]

REQUESTS FILED	
By patent owner	18
By third party	60
Total	78
DETERMINATIONS ON REQUESTS	
Requests granted	
By examiner	30
By petition	2
Requests denied	2
Total	34
REQUESTS HAVING RELATED LITIGATION	30
COURT ORDERED REEXAMINATIONS	4
AVERAGE AGE OF PATENTS (years)	6.99
AGE RANGE OF PATENTS (years)	0.47-18.25
AVERAGE CLAIMS PER REQUEST	13.20
AVERAGE REFERENCES PER REQUEST	9.36
FILINGS BY DISCIPLINE	
Chemical	23
Electrical	25
Mechanical	30
Total	78

[1] Reexamination was instituted on July 1, 1981, in accordance with provisions of P.L. 96-517.

Table 11.—SUMMARY OF CONTESTED PATENT CASES

(Within the Patent and Trademark Office)

Patent and Trademark Office Tribunal	Totals
BOARD OF PATENT APPEALS	
Cases Pending as of 9/30/80:	
Appeals	4,563
Reconsideration	56
Cases Filed During FY 81:	
Appeals	3,871
Reconsideration	366
Total	8,856
Disposals	
Affirmed	2,173
Affirmed-In-Part	256
Dismissed	9
Reversed	797
Suspended	0
Withdrawn	231
Total Disposals[1]	3,822
Total Cases Pending as of 9/30/81[2]	5,034
BOARD OF PATENT INTERFERENCES	
Interferences Pending as of 9/30/80	588
Interferences Declared During FY 81	211
Total	799
Disposals	
Interferences Terminated	268
Total Interferences Awaiting Final Board Disposition as of 9/30/81:	
Awaiting a Final Decision	42
Awaiting the Setting of a Final Hearing	46
Set for Final Hearing	8
Total Interferences Awaiting Final Board Disposition	96
Total Interferences Pending as of 9/30/81	531

[1] Reconsideration included: 356
[2] Reconsideration included: 66

Table 12.—U.S. GOVERNMENT AGENCY PATENTS[1]

(By Fiscal Year)

Agency	1971	1972	1973	1974	1975	1976	TQ	1977	1978	1979	1980	1981	Total
Agriculture	118	119	97	127	130	159	34	104	70	39	54	53	1,104
Air Force	190	195	171	160	139	164	40	183	137	115	159	123	1,776
Army	343	397	384	446	301	374	114	376	262	214	233	229	3,673
AEC	278	309	220	276	[2]111	0	0	0	0	0	0	0	1,194
Commerce	5	8	3	3	5	14	2	7	5	9	6	5	72
Energy	0	0	0	0	131	273	66	224	198	166	159	233	1,450
State	0	0	0	2	0	3	0	1	1	0	0	0	7
Transportation	1	0	0	7	7	11	3	0	0	4	3	3	39
NSA	0	0	0	0	0	0	0	0	0	2	1	1	4
EPA	0	0	2	6	6	9	2	4	3	4	3	10	49
FAA	0	7	2	1	0	0	0	0	0	3	0	0	13
FBI	0	0	0	1	0	0	0	0	0	0	0	0	1
HEW/HHS	24	24	22	39	34	40	6	17	31	20	23	27	307
Interior	46	76	48	57	56	67	7	68	59	20	35	43	582
Library of Congress	0	0	0	0	0	1	1	1	0	0	0	0	3
NASA	358	313	187	285	149	139	14	93	116	80	74	70	1,878
NSF	1	2	0	0	0	1	0	0	0	0	0	0	4
Navy	563	651	639	626	522	731	149	535	363	299	390	326	5,794
Post Office	0	1	0	0	0	1	7	4	0	0	0	0	13
TVA	11	2	7	4	4	8	3	5	2	0	0	0	46
Treasury	0	0	1	0	0	0	0	0	1	0	0	2	4
VA	0	0	0	2	3	1	0	1	2	1	2	0	12
USA[3]	9	7	17	8	15	33	6	45	30	13	14	11	208
Justice	0	0	0	0	0	0	0	0	0	2	0	0	2
FCC	0	0	0	0	0	0	0	5	1	0	0	2	8
Total	1,947	2,111	1,800	2,050	1,613	2,029	454	1,673	1,281	991	1,156	1,138	18,243

[1] Data in this table represent patents assigned to agencies at the time of patent issue.
[2] AEC absorbed into DOE in 1976.
[3] United States of America—no agency indicated in data base.

Table 13.—PATENTS ISSUED TO RESIDENTS OF THE UNITED STATES

(1974–1981)[1]

State Territory	1974	1975	[2]1976	[2]1977	1978	1979	1980	1981
Alabama	322	221	265	208	205	163	201	196
Alaska	29	30	34	26	29	18	31	12
American Samoa	11	13	13	5	4	3	8	0
Arizona	538	436	511	481	464	382	446	555
Arkansas	102	91	102	102	108	65	73	102
California	7,864	6,510	7,101	6,923	6,211	4,839	5,335	6,038
Canal Zone	5	8	5	2	4	4	2	1
Colorado	668	595	649	617	561	471	528	593
Connecticut	1,873	1,612	1,752	1,552	1,385	1,086	1,210	1,273
Delaware	588	461	513	413	384	264	271	326
District of Columbia	74	88	83	70	62	58	58	76
Florida	1,166	1,059	1,085	1,096	1,051	798	1,024	1,258
Georgia	404	353	383	337	346	311	337	424
Guam	12	3	4	1	3	2	1	0
Hawaii	55	61	51	43	41	32	32	49
Idaho	111	99	94	80	73	60	80	88
Illinois	4,653	3,959	4,173	3,751	3,390	2,581	2,868	2,882
Indiana	1,374	1,172	1,177	1,069	998	813	865	1,016
Iowa	494	386	446	451	366	261	331	379
Kansas	404	362	351	302	307	256	255	251
Kentucky	336	343	323	281	288	227	262	282
Louisiana	518	357	404	352	319	266	282	327
Maine	76	76	61	52	71	53	61	86
Maryland	1,124	913	1,072	861	829	665	702	770
Massachusetts	2,421	2,062	2,192	1,860	1,758	1,475	1,555	1,754
Michigan	3,215	2,832	2,691	2,474	2,373	1,875	2,130	2,457
Minnesota	1,230	1,029	1,082	968	905	786	851	975
Mississippi	88	103	100	74	76	68	68	81
Missouri	851	712	728	651	687	474	613	729
Montana	36	60	48	45	65	35	55	71
Nebraska	153	147	140	130	119	108	109	129
Nevada	78	92	85	111	105	84	88	103
New Hampshire	195	165	171	176	170	137	160	174
New Jersey	4,320	3,723	4,188	3,687	3,594	2,719	2,913	3,279
New Mexico	144	81	145	116	104	68	105	119
New York	6,120	5,015	5,109	4,737	4,259	3,168	3,406	3,812
North Carolina	586	535	576	540	529	409	491	600
North Dakota	53	46	45	44	58	30	35	30
Ohio	3,815	3,215	3,223	2,898	2,761	2,026	2,165	2,624
Oklahoma	811	747	725	618	655	519	592	709
Oregon	433	348	357	328	349	281	314	357
Pennsylvania	3,982	3,578	3,583	3,223	3,029	2,277	2,410	2,797
Puerto Rico	25	25	14	25	25	15	9	27
Rhode Island	247	215	217	209	164	128	143	137
South Carolina	278	259	274	233	281	183	232	260
South Dakota	39	45	48	43	40	27	17	38
Tennessee	412	399	416	374	372	311	376	451
Texas	2,342	2,153	2,235	2,063	2,037	1,606	1,789	2,030
Utah	267	230	242	225	191	169	213	217
Vermont	115	76	70	75	79	61	56	85

Table 13.—PATENTS ISSUED TO RESIDENTS OF THE UNITED STATES—Continued

(1974–1981)[1]

State Territory	1974	1975	[2]1976	[2]1977	1978	1979	1980	1981
Virgin Islands	6	19	7	9	4	7	7	3
Virginia	803	644	696	637	600	426	511	618
Washington	597	530	595	561	540	449	518	534
West Virginia	166	126	162	162	172	134	144	161
Wisconsin	1,239	1,041	948	882	846	618	760	806
Wyoming	39	34	43	38	31	32	35	43
U.S. Air Force[3]	4	0	1	1	0	0	1	0
U.S. Army[3]	1	0	0	0	0	0	0	0
U.S. Navy[3]	0	0	0	0	1	0	0	0
TOTAL	57,812	49,494	51,808	47,292	44,482	34,383	38,134	43,194

[1] Data includes design, plant, and reissue patents.
[2] The Transition Quarter, July 1, 1976, to September 30, 1976, has been omitted.
[3] Represents residents of the United States with military addresses.

Table 14.—UNITED STATES PATENT APPLICATIONS FILED BY RESIDENTS OF FOREIGN COUNTRIES

(1978–1981)

Country	1978	1979	1980	1981
Algeria	4	0	0	0
Antigua	0	0	0	1
Argentina	72	72	54	62
Australia	582	630	685	718
Austria	438	463	399	517
Bahamas	17	13	5	8
Bahrain	0	1	1	0
Barbados	0	1	0	0
Belgium	423	408	389	403
Bermuda	1	5	2	1
Bolivia	5	4	0	2
Brazil	75	73	61	68
British Virgin Islands	0	0	0	2
Brunei	0	0	0	1
Bulgaria	47	36	39	36
Burma	1	0	0	0
Canada	2,359	2,230	2,289	2,413
Chile	9	8	9	12
China, People's Republic of	9	12	12	5
Colombia	8	9	5	5
Congo	0	1	1	0
Costa Rica	6	8	10	0
Cuba	3	4	2	1
Cyprus	1	1	1	1
Czechoslovakia	98	79	88	82
Denmark	281	273	213	275
Dominican Republic	1	0	3	1
Ecuador	4	1	1	2
Egypt	2	8	3	2
El Salvador	3	0	0	1

Table 14.—UNITED STATES PATENT APPLICATIONS FILED BY RESIDENTS OF FOREIGN COUNTRIES—Continued

(1978-1981)

Country	1978	1979	1980	1981
Finland	241	261	294	275
France	3,343	3,152	3,533	3,519
Germany, Dem. Republic of	33	126	109	88
Germany, Fed. Republic of	9,520	9,091	9,872	10,133
Gilbert Islands	0	0	2	0
Greece	23	20	15	31
Greenland	0	0	1	0
Guatemala	2	5	2	2
Haiti	4	2	0	2
Honduras	0	0	0	1
Hong Kong	86	112	118	103
Hungary	137	182	201	207
Iceland	15	4	2	5
India	27	29	22	18
Indonesia	5	0	9	2
Iran	12	3	2	3
Ireland	48	44	45	54
Israel	212	248	272	290
Italy	1,402	1,527	1,520	1,544
Ivory Coast	0	0	0	1
Jamaica	3	3	1	0
Japan	10,355	11,053	13,079	14,375
Jordan	0	0	1	1
Kenya	2	1	1	0
Korea, Dem. Republic of	0	2	8	3
Korea, Republic of	38	37	39	55
Kuwait	2	1	12	8
Lebanon	1	4	1	3
Liberia	2	1	0	0
Libya	1	3	0	0
Liechtenstein	13	23	21	28
Luxembourg	33	35	31	44
Madagascar	9	1	0	0
Malawi	0	1	0	0
Malaysia	5	0	4	8
Mali	1	0	0	0
Malta	0	0	1	0
Martinique	0	1	0	0
Mauritania	0	2	0	0
Mauritius	0	0	1	0
Mexico	111	91	83	104
Midway Islands	0	0	0	1
Monaco	13	13	8	6
Morocco	1	0	2	2
Nauru	0	0	1	0
Netherlands	1,041	1,035	1,035	1,109
New Zealand	116	113	132	126
Nicaragua	1	4	0	0
Nigeria	4	3	4	1
Niue	0	0	1	0

Table 14.—UNITED STATES PATENT APPLICATIONS FILED BY RESIDENTS OF FOREIGN COUNTRIES—Continued

(1978-1981)

Country	1978	1979	1980	1981
Norway	171	168	127	160
Pakistan	1	0	2	2
Panama	2	3	2	1
Paraguay	0	0	1	2
Peru	4	0	3	2
Philippines	21	9	17	12
Poland	63	87	71	50
Portugal	3	6	7	3
Romania	27	21	8	13
San Marino	0	1	3	0
Saudi Arabia	4	0	2	3
Senegal	0	2	0	0
Singapore	6	11	7	5
South Africa	177	217	188	219
Soviet Union	624	550	341	472
Spain	153	177	168	190
St. Helena	0	0	1	0
Sudan	1	1	0	0
Swaziland	0	2	0	0
Sweden	1,379	1,301	1,256	1,447
Switzerland	2,062	1,967	1,994	1,946
Taiwan	233	254	369	423
Tanzania	0	0	0	1
Thailand	4	6	5	4
Trinidad & Tobago	2	6	0	1
Tunisia	3	3	2	4
Turkey	3	4	5	2
United Arab Emirates	0	0	0	2
United Kingdom	4,691	4,423	4,470	4,474
Upper Volta	1	1	0	0
Uruguay	12	9	27	11
Vanuatu	0	0	3	0
Venezuela	19	22	18	30
Vietnam, Republic of	0	0	1	0
Yugoslavia	31	29	24	31
Zimbabwe	2	1	3	1
Total	41,002	40,854	43,882	46,283

Table 15.—PATENTS ISSUED BY THE UNITED STATES TO RESIDENTS OF FOREIGN COUNTRIES

(1974–1981)[1]

Country	1974	1975	[2]1976	[2]1977	1978	1979	1980	1981
Algeria	0	0	1	0	1	0	0	0
Argentina	26	32	22	24	46	90	42	24
Australia	252	253	299	272	297	252	269	360
Austria	263	275	339	297	287	221	253	299
Bahamas	16	17	9	5	8	7	4	6
Bahrain	0	0	0	0	0	0	0	1
Belgium	345	302	337	306	280	213	235	296
Bermuda	1	3	2	4	1	1	2	5
Bolivia	4	9	6	0	3	0	7	1
Brazil	19	22	20	25	30	12	24	29
Bulgaria	17	15	27	36	32	18	19	33
Burma	0	0	0	0	1	1	1	0
Canada	1,511	1,324	1,411	1,388	1,338	1,105	1,118	1,330
Chile	6	5	7	2	4	3	2	3
China, People's Republic of	0	0	0	2	0	1	2	4
Colombia	10	6	4	6	12	5	7	6
Congo	3	4	12	11	1	0	1	1
Costa Rica	1	2	8	0	1	11	2	7
Cuba	1	1	1	1	3	1	3	3
Cyprus	0	2	1	2	1	0	2	0
Czechoslovakia	105	121	110	109	93	52	56	48
Dahomey	0	1	1	0	0	0	0	0
Denmark	184	176	210	172	183	133	147	160
Dominican Republic	3	1	0	1	1	0	0	1
Ecuador	6	6	7	1	0	1	0	1
Egypt	3	1	4	1	0	1	1	3
El Salvador	1	1	5	3	2	5	1	0
Ethiopia	0	0	0	2	2	0	0	0
Finland	121	102	112	99	141	85	124	147
France	2,548	2,399	2,666	2,255	2,225	1,728	2,015	2,258
Germany, Dem. Republic of	0	0	0	1	3	0	22	42
Germany, Fed. Republic of	6,360	5,780	6,800	5,902	5,883	4,935	5,354	6,436
Greece	19	3	17	11	11	7	5	7
Guatemala	9	3	5	3	4	0	1	1
Guinea	1	0	0	1	1	0	0	0
Haiti	1	4	4	1	0	2	2	1
Honduras	1	0	1	1	1	1	0	0
Hong Kong	23	19	46	32	33	30	48	60
Hungary	51	64	66	69	82	57	77	98
Iceland	1	5	6	3	13	35	11	1
India	20	17	14	16	20	15	10	13
Indonesia	10	6	5	0	4	5	3	2
Iran	4	4	5	3	5	8	7	2
Ireland	25	26	34	21	32	21	22	23
Israel	94	95	119	97	107	92	105	134
Italy	900	762	866	810	761	638	742	933
Ivory Coast	1	0	0	1	0	0	0	0
Jamaica	1	1	0	3	3	1	4	0
Japan	5,964	5,899	7,383	6,462	7,099	5,827	6,626	8,459
Jordan	0	0	0	0	1	1	0	0

Table 15.—PATENTS ISSUED BY THE UNITED STATES TO RESIDENTS OF FOREIGN COUNTRIES—Continued

(1974-1981)[1]

Country	1974	1975	[2]1976	[2]1977	1978	1979	1980	1981
Kenya	0	0	2	1	0	0	4	0
Kiribati	0	0	0	0	0	0	0	1
Korea, Republic of	10	8	9	5	14	9	9	20
Kuwait	0	1	0	0	1	2	0	0
Lebanon	1	7	4	0	3	0	0	2
Liberia	0	0	0	0	1	0	0	1
Libya	0	1	0	1	2	0	1	0
Liechtenstein	12	10	14	10	12	10	14	17
Luxembourg	18	13	20	14	21	19	17	26
Madagascar	0	0	0	0	1	1	0	0
Malawi	0	0	0	0	0	0	0	1
Malaysia	1	0	3	2	5	2	1	1
Mali	0	0	0	0	2	0	1	0
Mauritania	0	1	0	0	0	0	0	1
Mauritius	0	0	0	0	0	0	0	1
Mexico	50	71	78	65	42	39	43	40
Monaco	2	9	8	5	9	1	6	7
Morocco	2	1	0	4	1	1	1	0
Namibia	0	0	0	0	0	0	1	0
Netherlands	778	665	709	770	680	579	585	700
New Zealand	22	24	37	32	46	28	51	62
Nicaragua	0	1	3	2	3	0	0	1
Nigeria	0	1	1	1	3	1	1	2
Norway	97	106	110	113	103	89	80	89
Pakistan	1	0	2	1	0	0	1	0
Panama	1	5	4	3	0	1	2	0
Paraguay	0	0	0	1	1	0	2	0
Peru	1	5	8	6	1	3	1	0
Philippines	15	7	8	10	8	6	3	6
Poland	27	32	35	26	29	30	30	34
Portugal	4	7	5	3	5	1	1	3
Romania	34	21	15	20	11	7	16	13
Saudi Arabia	0	2	0	3	0	1	2	0
Senegal	0	0	0	0	0	1	0	2
Singapore	9	6	4	3	5	2	5	4
South Africa	95	74	89	81	86	67	80	106
Soviet Union	444	454	435	399	386	398	403	427
Spain	99	87	105	114	95	63	65	71
Sri Lanka	1	0	0	2	0	0	1	0
Sudan	1	2	0	1	0	0	0	0
Swaziland	0	0	0	0	0	0	1	0
Sweden	944	939	1,118	1,005	918	680	778	889
Switzerland	1,580	1,354	1,603	1,438	1,374	1,107	1,133	1,313
Syria	0	0	1	0	0	0	0	0
Taiwan	17	28	29	49	40	35	58	90
Tanzania	0	0	0	1	0	0	0	0
Thailand	0	2	1	3	0	1	3	1
Trinidad & Tobago	3	3	1	3	4	4	2	1
Tunisia	0	0	0	1	0	0	3	0
Turkey	3	0	0	2	1	1	4	1

Table 15.—PATENTS ISSUED BY THE UNITED STATES TO RESIDENTS OF FOREIGN COUNTRIES—Continued

(1974–1981)[1]

Country	1974	1975	[2]1976	[2]1977	1978	1979	1980	1981
Uganda	0	1	1	0	0	0	0	0
United Kingdom	3,242	3,071	3,443	2,831	2,850	2,203	2,281	2,616
Upper Volta	0	0	0	0	0	0	0	1
Uruguay	1	1	2	0	0	0	0	4
Vanuatu	0	0	0	0	0	0	0	1
Venezuela	7	9	2	9	8	13	11	12
Vietnam, Republic of	1	2	1	1	1	0	1	0
Yemen	0	0	0	0	0	1	0	0
Yugoslavia	8	10	5	7	9	7	13	10
Zambia	0	0	1	0	0	0	0	0
Zimbabwe	1	2	1	4	1	0	1	1
TOTALS	26,464	24,821	28,909	25,513	25,838	21,035	23,093	27,816

[1] Data includes design, plant, and reissue patents.
[2] The Transition Quarter, July 1, 1976, to September 30, 1976, has been omitted.

Table 16.—PATENT CLASSIFICATION ACTIVITY

(1978–1981)

Classification Activity	1978	1979	1980	1981
PATENTS RECLASSIFIED[1]				
Cross-Reference U.S. Patents	370,050	314,723	219,203	200,652
Foreign Patents	239,000	239,000	232,000	180,000
Original U.S. Patents	149,602	149,151	145,206	112,420
Total Patents Reclassified	758,652	702,874	596,409	493,072
ORIGINAL PATENTS PROFESSIONALLY RECLASSIFIED[2]				
Completed Projects in FY 1981				113,284
Pro Rata Count of Projects[3]				134,902
SUBCLASSES ESTABLISHED	4,924	6,883	5,261	5,287

[1] Includes only those for which final classification processing, both professional and clerical, was completed.
[2] Measured in terms of original patents, data available for 1981 only. Professionals includes classifiers, technicians, and patent examiner detailees. Data does not include clerical processing.
[3] Original patents reclassified during the fiscal year irrespective of project completion status.

Table 17.—SUMMARY OF TRADEMARK EXAMINING ACTIVITIES

(1975–1981)[1]

Item	1975	1976	1977	1978	1979	1980	1981
Applications for Registration Filed	33,898	37,074	44,539	50,106	50,672	52,149	55,152
Disposal of Trademark Applications:							
Applications Maturing to Registration	29,651	31,266	27,431	31,623	24,961	16,366	34,748
Applications Abandoned	11,905	7,986	9,055	8,287	10,061	8,023	14,589
Applications Approved for Publication	29,651	31,266	27,431	31,623	24,961	28,974	34,759
Certificates of Registration Issued:[2]							
1946 Act Principal Register	26,438	27,286	24,256	28,236	21,496	14,149	30,223
1946 Act Supplemental Register	886	816	770	685	714	465	1,083
Total	27,324	28,102	25,026	28,921	22,210	14,614	31,306
Renewal of Registration:							
Applications Filed	5,687	6,833	5,854	5,567	5,623	5,892	5,693
Applications Abandoned	55	121	18	52	32	35	62
Registrations Renewed	5,474	6,914	6,215	5,254	5,404	5,862	5,884
Affidavits, Sec 8:							
Affidavits Filed	14,644	15,665	13,463	13,351	13,864	13,633	17,071
Affidavits Disposed	13,488	12,376	12,796	9,681	7,560	11,332	14,936
Affidavits for Benefits Under Sec. 12(c):							
Affidavits Filed	29	24	30	77	10	85	40
Affidavits Abandoned	0	0	3	0	3	0	0
Published Under Sec. 12(c)	25	56	21	84	34	54	77
Pendency Time of Average Trademark Application:							
Between Filing and Examiner's First Action[3]	4.5	3.0	3.0	6.0	10.2	11.5	11.0
Between Filing and Registration/ Abandonment[3]	17.3	16.0	14.8	16.2	17.9	24.9	24.0

[1] The Transition Quarter, July 1, 1976, to September 30, 1976, has been omitted.

[2] A single certificate of registration is issued for an application covering more than one class, but elsewhere in this table, applications are counted extra times for extra classes.

[3] Average pendency time in months.

Table 18.—TRADEMARK APPLICATIONS FILED FOR REGISTRATION AND RENEWAL AND TRADEMARK AFFIDAVITS FILED

(1962–1981)

Year	For Regis.	For Renewal	Section 8 Affidavit	Sec. 12(c) Affidavit
1962	24,866	3,138	14,720	337
1963	24,224	2,604	12,752	311
1964	25,574	2,824	12,055	261
1965	26,657	3,049	13,923	308
1966	28,438	3,695	13,705	518
1967	27,628	3,844	11,156	341
1968	28,292	4,089	12,116	231
1969	31,268	6,267	13,890	90
1970	33,807	6,329	14,283	59
1971	32,803	6,189	12,263	76
1972	33,741	5,980	13,256	46
1973	[1]36,204	5,614	13,605	74
1974	34,193	5,633	13,259	55
1975	33,898	5,687	14,644	29
1976[2]	37,074	6,833	15,665	24
1977[2]	44,539	5,854	13,463	30
1978	50,106	5,567	13,351	77
1979	50,672	5,623	13,864	10
1980	52,149	5,892	13,633	85
1981	55,152	5,693	17,071	40

[1] Revised.
[2] The Transition Quarter, July 1, 1976, to September 30, 1976, has been omitted.

Table 19.—SUMMARY OF PENDING TRADEMARK APPLICATIONS AND TRADEMARK AFFIDAVITS

(As of September 30, 1981)

Stage of Processing	Applications		Affidavits	
	For Regis.	For Renewal	Under Sect. 8	Sect. 12(c)
IN PREEXAMINATION PROCESSING	12,955	—	—	—
UNDER EXAMINATION				
Amended, awaiting action by examiner	15,364	0	0	0
Awaiting first action by examiner	29,437	117	810	1
Awaiting subsequent action (by applicant, on appeal, in adversary proceedings, in clerical processing)	34,575	618	1,808	1
Total Under Examination	79,376	735	2,618	1
Total	92,331	735	2,618	1
IN POSTEXAMINATION PROCESSING (Includes all applications in all phases of publication and issue)	24,267	853	0	107
TOTAL IN PATENT AND TRADEMARK OFFICE	116,598	1,588	2,618	108

Table 20.—SUMMARY OF CONTESTED TRADEMARK CASES

(Within the Patent and Trademark Office)

Trademark Trial and Appeal Board	Ex Parte	Cancel	Conc. Use	Inter	Oppos.	Total
Receipts						
Cases Pending as of 9/30/80	193	516	24	0	1,565	2,298
Cases Filed During FY 1981	240	329	26	1	1,644	2,240
Total Receipts	433	845	50	1	3,209	4,538
Disposals	177	309	20	0	1,088	1,594
Total Cases Pending as of 9/30/81	256	536	30	1	2,121	[1]2,944

[1] Does not include those cases which have been finally decided but which are awaiting the expiration of the appeal period.

Table 21.—TRADEMARKS REGISTERED, RENEWED, AND PUBLISHED UNDER SECTION 12(c)[1]

(1962–1981)

Year	Registered[2]	Renewed	Published Under 12(c)
1962	15,909	3,071	331
1963	18,266	2,450	322
1964	20,689	2,834	329
1965	19,452	2,870	336
1966	18,671	3,441	497
1967	20,604	3,820	403
1968	20,385	3,726	290
1969	20,306	5,442	182
1970	21,974	6,370	103
1971	21,686	6,380	112
1972	21,062	5,836	56
1973	25,432	5,398	69
1974	24,838	5,984	54
1975	27,324	5,474	25
1976[3]	28,102	6,914	56
1977[3]	25,026	6,251	21
1978	28,921	5,254	84
1979	22,210	5,404	34
1980	14,614	5,862	54
1981	31,306	5,884	77

[1] Includes withdrawn numbers.
[2] Certificates of registration issued.
[3] The Transition Quarter, July 1, 1976,to September 30, 1976, has been omitted.

Table 22.—UNITED STATES TRADEMARK APPLICATIONS FILED BY RESIDENTS OF FOREIGN COUNTRIES

(1978–1981)

Country	1978	1979	1980	1981
Albania	1	0	0	0
Algeria	0	1	0	1
Andorra	0	1	0	0
Argentina	20	20	43	13
Australia	110	130	109	136
Austria	53	36	50	35
Bahamas	3	3	0	4
Barbados	0	0	0	3
Belgium	43	37	19	49
Bermuda	5	4	19	17
Brazil	46	43	23	42
British Virgin Islands	0	0	4	0
Bulgaria	1	0	0	0
Canada	632	797	702	859
Cayman Islands	0	0	4	0
Chile	6	4	0	12
China, People's Republic of	15	0	19	33
Colombia	7	6	12	7
Costa Rica	2	2	0	3
Cuba	1	1	0	0
Czechoslovakia	6	7	0	3
Denmark	58	57	85	54
Dominican Republic	1	3	0	6
Ecuador	0	0	0	1
Egypt	0	0	0	3
El Salvador	0	1	0	2
Fiji	0	0	0	1
Finland	40	27	19	37
France	516	568	807	689
Germany, Dem. Republic of	1	0	0	3
Germany, Fed. Repulic of	676	671	833	696
Greece	7	5	0	4
Guam	2	0	0	0
Guatemala	1	0	4	3
Guyana	0	5	0	0
Honduras	0	2	0	0
Hong Kong	59	71	105	90
Hungary	2	0	12	3
Iceland	0	0	0	4
India	4	7	12	4
Indonesia	1	1	0	0
Iran	1	8	0	6
Ireland	9	18	8	19
Israel	15	37	27	22
Italy	324	333	365	367
Jamaica	1	5	0	0
Japan	414	445	469	613
Kenya	0	2	0	0
Kiribati	0	0	0	1
Korea, Republic of	11	9	0	14

Table 22.—UNITED STATES TRADEMARK APPLICATIONS FILED BY RESIDENTS OF FOREIGN COUNTRIES—Continued

(1978-1981)

Country	1978	1979	1980	1981
Kuwait	1	1	0	0
Lebanon	3	1	0	5
Liberia	0	3	0	2
Liechtenstein	13	21	31	20
Luxembourg	3	6	0	1
Macau	0	0	0	3
Madagascar	0	2	4	9
Malaysia	1	1	0	1
Mexico	61	46	62	58
Monaco	4	5	0	3
Nauru	1	0	0	6
Netherlands	99	89	113	120
New Zealand	35	38	50	26
Nicaragua	0	0	12	1
Niger	0	3	4	0
Norway	23	23	16	19
Panama	13	13	8	10
Paraguay	0	0	16	0
Peru	3	6	0	2
Philippines	6	6	4	15
Poland	0	2	8	3
Portugal	18	15	16	59
Qatar	0	0	0	1
Romania	4	4	0	2
Rwanda	0	1	0	0
San Marino	1	0	0	1
Saudi Arabia	1	1	0	2
Sierra Leone	0	1	0	0
Singapore	7	13	0	10
South Africa	33	29	0	21
Soviet Union	6	5	35	9
Spain	96	100	159	107
Sri Lanka	0	0	0	1
Surinam	0	0	0	2
Swaziland	1	3	0	0
Sweden	110	129	167	124
Switzerland	181	243	268	250
Syria	0	0	0	1
Taiwan	7	40	31	38
Thailand	1	1	12	2
Trinidad & Tobago	0	1	12	1
Turkey	1	0	0	0
Uganda	0	1	0	0
United Kingdom	531	582	547	597
Venezuela	5	2	4	5
Vietnam, Republic of	0	0	0	2
Yugoslavia	1	1	0	4
Zaire	1	0	0	0
Zimbabwe	0	1	0	0
Total	4,365	4,806	5,329	5,402

Table 23.—TRADEMARKS REGISTERED BY THE UNITED STATES TO RESIDENTS OF FOREIGN COUNTRIES

(1978–1981)

Country	1978	1979	1980	1981
Argentina	9	6	4	14
Australia	48	38	29	52
Austria	14	28	20	32
Bahamas	1	0	0	0
Belgium	27	22	11	30
Bermuda	1	0	0	0
Brazil	15	17	9	22
Canada	257	257	180	288
Chile	1	0	1	1
China, Peoples Republic of	2	3	3	6
Colombia	1	3	1	2
Costa Rica	1	0	0	0
Cuba	0	0	0	1
Czechoslovakia	2	3	3	4
Denmark	38	32	14	27
El Salvador	1	2	0	0
Finland	11	13	15	8
France	283	248	174	266
Germany, Federal Republic of	336	345	223	358
Greece	4	1	1	6
Hong Kong	31	31	19	52
Hungary	1	1	0	0
Iceland	1	2	0	2
India	4	1	0	0
Ireland	9	10	2	6
Israel	7	6	3	6
Italy	130	137	98	155
Jamaica	0	1	0	0
Japan	247	231	137	271
Korea, Republic of	1	11	3	9
Kuwait	0	0	1	1
Lebanon	0	0	1	0
Liberia	0	0	0	1
Liechstenstein	11	5	3	3
Luxembourg	1	0	1	0
Mexico	28	35	20	18
Monaco	1	0	1	1
Netherlands	44	70	21	51
New Zealand	7	6	8	19
Norway	11	5	5	2
Panama	1	1	1	4
Peru	0	2	0	2
Philippines	0	1	0	0
Poland	3	0	0	0
Portugal	5	8	2	2
Romania	0	1	0	3
Saudi Arabia	0	0	2	0
Singapore	0	0	1	0
South Africa	12	20	7	20
Soviet Union	0	7	1	5

Table 23.—TRADEMARKS REGISTERED BY THE UNITED STATES TO RESIDENTS OF FOREIGN COUNTRIES—Continued

(1978–1981)

Country	1978	1979	1980	1981
Spain	79	58	46	54
Sweden	68	55	40	52
Switzerland	123	109	66	123
Taiwan	0	1	2	3
Thailand	0	1	0	0
Turkey	0	1	0	0
United Kingdom	281	263	144	225
Venezuela	2	4	0	1
Yugoslavia	3	1	0	0
Total	2,163	2,103	1,323	2,208

Table 24.—SUMMARY OF SERVICES FURNISHED TO THE PUBLIC AND GOVERNMENT AGENCIES

(For a Fee or Without Charge)

Item Service Furnished	Totals
ASSIGNMENTS[1]:	
Abstracts of Title	684
Copies of Legal Documents Provided	51,642
Documents Recorded AffectingTitle	57,339
Transfers of Records from Pending to Public Files[2]	69,400
CERTIFIED DOCUMENTS[3]	77,765
DRAFTING:	
New Drawing Sheets Inspected	316,615
Total Drawings Sheets Corrected	[4]27,269
Lost Drawings Replaced	753
PATENT AND TRADEMARK COPIES SUPPLIED:	
National Archives[2]	197,700
Foreign Exchange Programs[2]	3,097,332
Depository Library Subscriptions	1,186,100
Orders Received from the Public	3,294,089
Total Copies Supplied	7,775,221
PATENT AND TRADEMARK PAGES REPRODUCED[5]	18,076,543

[1] Briefs of all legal documents recorded against a specific patent or trademark property.
[2] Without charge.
[3] Copies of patent and trademark official file wrapper copies.
[4] Corrections to patent and trademark application drawings.
[5] To fill orders for copies of patents and trademarks.

Table 25.—ACTIONS ON PETITIONS TO THE COMMISSIONER OF PATENTS AND TRADEMARKS

(During Fiscal Year 1981)

Nature of the Petition	Totals
PATENT MATTERS	
Acceptance of:	
Amendments Filed After Payment of Issue Fee	58
Late Assignments	23
Late Issue Fees	499
Late Priority Papers	37
Access	132
Certificates of Correction	7,371
Deferment of Issue	63
Filing Date	241
Interference	113
Make Special:	
Infringement	123
Manufacture	16
Other	567
New Notice of Allowance	99
Public Use	1
Reexamination Proceedings	5
Reissue in Divisions	6
Restriction	87
Revivals	1,305
Rule 47 (37 CFR 1.47)	698
Second Extensions of Time	11,515
Supervisory Authority	375
Withdrawal of Attorney	930
Withdrawal from Issue	152
Change of Inventorship	3
Withdrawals of Holding of Aband/Pat. Lapse	739
Total Actions on Patent Petitions	25,158
OTHER RELATED PATENT MATTERS	
Applications Involving the Duty of Disclosure:	
Receipts	208
Disposals:	
Abandoned	78
Not Stricken	39
Stricken	4
Applications Withdrawn	0
Total Disposals	121
Protests Filed in:	
Original Applications	19
Reissue Applications	106
Total Protests Filed	125
TRADEMARK MATTERS	
Acceptance of Late Filed:	
Fees (Excluding Section 8)	10
Papers (Excluding Section 8)	25
Decision by Examiner	4
Extensions of Time	5
Interferences	12
Make Special and Revive	7
Requesting Recordation in Assignment Division	11
Restore Jurisdiction to Examiner	2
Sections 8 or 15	17
Supervisory Authority (2.146(a)(3))	23
Miscellaneous	17
Total Actions on Trademark Petitions	133

Table 25.—ACTIONS ON PETITIONS TO THE COMMISSIONER OF PATENTS AND TRADEMARKS—Continued

(During Fiscal Year 1981)

Nature of the Petition	Totals
PETITIONS AWAITING ACTION AS OF 9/30/81:	
Patent Matters	1,526
Trademark Matters	34

Table 26.—CASES IN LITIGATION

(Selected Courts of the United States)

Courts of the United States	Adminis. Review	Pat	TM	Total
SUPREME COURT				
Petitions for Writ of Certiorari				
Cases Pending as of 9/30/80	0	3	0	3
Cases Filed During FY 81	0	2	0	2
Total	0	5	0	5
Disposals:				
Denied	0	3	0	3
Dismissed	0	0	0	0
Granted	0	0	0	0
Reversed	0	2	0	2
Total Disposals	0	5	0	5
Total Cases Pending as of 9/30/81	0	0	0	0
COURTS OF APPEALS FOR THE DISTRICT OF COLUMBIA				
Cases Pending as of 9/30/80	3	0	0	3
Cases Filed During FY 81	3	3	0	6
Total	6	3	0	9
Disposals:				
Affirmed	2	0	0	2
Dismissed	1	0	0	1
Reversed	0	1	0	1
Total Disposals	3	1	0	4
Total Cases Pending as of 9/30/81	3	2	0	5
DISTRICT COURTS FOR THE DISTRICT OF COLUMBIA				
Cases Pending as of 9/30/80	2	10	0	12
Cases Filed During FY 81	7	8	1	16
Total	9	18	1	28
Disposals:				
Affirmed	4	4	0	8
Dismissed	3	3	1	7
Reversed	0	1	0	1
Affirmed-in-Part	0	0	0	0
Total Disposals	7	8	1	16
Total Cases Pending as of 9/30/81	2	10	0	12

Table 26.—CASES IN LITIGATION—Continued

(Selected Courts of the United States)

Courts of the United States	Ex Parte		Inter Partes		Total
	Pat	TM	Pat	TM	
COURT OF CUSTOMS AND PATENT APPEALS					
Cases Pending as of 9/30/80	70	5	8	6	89
Cases Filed During FY 81	83	4	17	20	124
Total Receipts	153	9	25	26	213
Disposals:					
Affirmed	63	4	3	6	76
Affirmed-in-Part	5	0	0	0	5
Dismissed:					
Appellant's Motion	8	0	1	6	15
Appellee's Motion	0	0	0	0	0
Joint Motion	2	1	0	1	4
Want of Prosecution	0	0	0	0	0
Remanded	2	0	6	1	9
Reversed	13	0	0	1	13
Writs of Mandamus:					
Denied	2	1	0	0	3
Granted	0	0	0	0	0
Dismissed	2	0	0	0	0
Total Disposals	97	6	10	14	127
Total Cases Pending as of 9/30/81	57	3	15	12	86

Notices of Appeals to Court of Customs and Patent Appeals received 10/1/80-9/30/81:

Ex parte patents and trademarks ..... 98 (11) not perfected
Inter partes patents ..... 13 (0) not perfected
Inter partes trademarks ..... 24 (7) not perfected

Table 27.—CASES IN LITIGATION

(Other Jurisdictions-Reported Cases)

Month	Patent Suits				Trademark Suits			
	Filed	Pat's Involved	Decs.	Pat's Involved	Filed	TM's Involved	Decs.	TM's Involved
October 1980	42	58	32	42	56	166	22	177
November	38	55	15	24	33	111	8	18
December	34	61	11	12	33	118	12	48
January	29	33	15	25	37	102	17	76
February	33	60	17	24	44	204	16	34
March	45	77	10	17	35	119	19	72
April	44	66	36	52	66	287	29	87
May	38	48	16	27	41	118	17	46
June	48	74	27	37	50	134	22	69
July	39	67	21	45	58	162	18	53
August	40	61	18	36	49	82	9	29
September 1981	41	53	16	22	63	194	16	35
Totals	471	713	234	363	565	1,797	205	744

*U.S. GOVERNMENT PRINTING OFFICE: 1982 360-997/2105